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# SMITHSONIAN INSTITUTION

FIVE-YEAR PROSPECTUS  
FY 1990 - FY 1994



JANUARY 1989

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SMITHSONIAN INSTITUTION  
*FIVE-YEAR PROSPECTUS, FY 1990-94*

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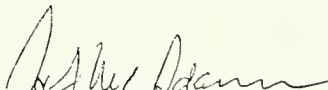
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At the meeting of the Board of Regents, January 30, 1989, it was

VOTED that the Board of Regents approves the Five-Year Prospectus, Fiscal Years 1990-94, anticipating that annual revisions will similarly be presented for its approval.

  
\_\_\_\_\_  
Robert McC. Adams, Secretary



## INTRODUCTION

The Smithsonian Institution was created by Act of Congress in 1846 to carry out the terms of the will of James Smithson of England, who bequeathed his entire estate in 1826 to the United States of America "to found at Washington, under the name of Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." This broad mandate allows the Institution to engage in a wide variety of activities. Over the course of its history, and under the direction of succeeding Secretaries, the Institution has evolved into an eminent research center and the world's largest museum complex. In service to all mankind, its activities span the globe and are devoted to research, museology, and public education in the arts, sciences, and history.

In 1977, the Board of Regents of the Smithsonian and the Secretary established a five-year planning process. Each successive five-year plan articulates the ways in which the Institution seeks to fulfill its mandate. This five-year planning process continues to evolve and now involves managers and staff at all levels of the Institution. The product of the planning process is the *Five-Year Prospectus*, a document that describes in broad terms the Institution's plan for programmatic emphasis and resource allocation during the five-year planning period. Through this process and common understanding, the Institution can more effectively allocate its financial, human, and physical resources to accomplish its various goals. The *Five-Year Prospectus* serves as the basis for executing short-term managerial, programmatic, and resource allocation decisions.

This document has three major components: the Institution's strategic plan; projections of net resources available to fund programmatic objectives; and the programs planned through FY 1994. Chapter 1, "Strategic Planning at the Smithsonian" outlines the important themes underlying the Institution's plans and includes three exhibits presenting the mission or "Statement of Purpose", the "Goals of the Institution", and the Secretary's "Areas of Emphasis" for the planning period. These statements elaborate on the Institution's broad mandate and are the basis for projected resource allocations.

As part of its planning process the Institution estimates the resources that will be available for meeting the Institution's goals. Chapter 2, "Sources of Funds" identifies the projected major sources of available funds during the planning period and describes briefly these funds, along with any expenses incurred in producing income, to arrive at a projection of net funds provided for program purposes. Chapter 3, "Uses of Funds, Summary" provides an overview of the application of funds by program.

The Chapters treating Research and Curation, Exhibitions, Education and Related Activities, Administration, and Facilities Planning describe major planned activities for each of five program categories.

The Appendices provide supplemental information. Appendix I provides a special discussion of the Institution's efforts in collections based research, a traditional area of interest to the Board of Regents. Appendix II defines the various program categories of expenditure. Appendix III arrays a detailed breakdown of the projected resource allocations by program for each bureau. Appendix IV arrays the projected resources by fund source for each bureau. Appendix V contains a list of projected planned projects for the Repair and Restoration of Buildings.

This *Prospectus* also complements budget justifications for appropriated funds that the Institution has submitted to the Office of Management and Budget and to Congress, as well as the recommended nonappropriated funds budget that the Secretary submits to the Board of Regents. Therefore, all projections are consistent with proposed budgets for FY 1990.



On November 24, 1987, Bonnie, one of the Zoo's eight orangutans, became a first-time mother. Kiko, the male baby, has become very active and has started to nibble on solid food, such as bananas, kale, and cabbage. Bonnie is proving to be a very protective mother also. She allows the other orangs to play with Kiko, but when their play becomes too rough, she reclaims her baby. Bonnie's exemplary maternal behavior is especially gratifying to her keepers because Bonnie was hand-reared after her mother died when Bonnie was born. (photo by Jessie Cohen)



## CHAPTER 1: STRATEGIC PLANNING AT THE SMITHSONIAN

As a first step in establishing the Institution's future direction, the Secretary and the Management Committee endeavored to amplify the Institution's basic mandate "to increase and diffuse knowledge." Their intent was to develop a more contemporary and more explicit statement of purpose for the Institution and a set of related long-term goals to govern strategic decisions. As part of this effort, senior managers paid considerable attention to the development of formal statements describing the Institution's essence, its management philosophy, its aspirations for program quality, and its heightened awareness of the need to reach a wider audience in more resourceful and sensitive ways. They also developed definite statements of appropriate managerial and programmatic "Areas of Emphasis" that represent the Institution's most important opportunities and requirements in the years ahead.

The Institution's "Statement of Purpose" appears as Exhibit 1. This statement affirms the Institution's commitment to standards of excellence and the mandate which accompanied James Smithson's bequest. A statement of the Institution's long-term goals appears in Exhibit 2, "Goals of the Institution." These "goals" represent the ways the Institution seeks to fulfill its basic mission to increase and diffuse knowledge.

The third strategic planning statement, the "Areas of Emphasis", appears in Exhibit 3. This statement outlines critical themes that represent the Institution's most important requirements and opportunities and that deserve immediate attention. For example, the "Areas of Emphasis" calls for heightened attention to affirmative action, both in terms of staffing and reaching a more diverse audience; accelerated reinstallation of permanent exhibitions; collection information systems; and increased scholarly pursuits. This document also affirms management's intent to critically evaluate "all programs and support activities for purposes of discontinuing those that have outlived their usefulness . . . improving the quality of programs . . . and redirecting resources to more important efforts."

At the beginning of the budget formulation process, the heads of bureaus and offices throughout the Institution received these three strategic planning statements. They served as the Secretary's formal guidance for operational planning and budget formulation for the five-year period. The bureaus' budget plans were to be responsive to and consistent with this guidance. After the bureaus submitted their budget plans for the next five years, the Secretary's Management Committee also used these statements to establish priorities for the Institution's FY 1990 federal budget request, the FY 1990 recommended budgets for nonappropriated funds, and in the development of the five-year plan.

## EXHIBIT 1

### SMITHSONIAN INSTITUTION

#### Statement of Purpose

The Smithsonian Institution was created by Act of Congress in 1846 to carry out the terms of the will of James Smithson of England, who bequeathed his entire estate in 1826 to the United States of America "to found at Washington, under the name of Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men."

Joseph Henry, the first Secretary, in his efforts to give direction to activities of the fledgling Institution, commented on Smithson's will in his annual report for 1864:

"He evidently did not intend by these precise terms to found a library or a mere museum for the diffusion of popular information to a limited community, but a cosmopolitan establishment, to **Increase** the Sum of human knowledge and to diffuse this to every part of the civilized world. No other interpretation of the will is either in accordance with the terms employed or with the character and habits of the founder. The Increase of human knowledge, by which we must understand additions to its sum, would be of little value without its diffusion, and to limit the latter to one city, or even to one country, would be an invidious restriction of the term **Men**."

Over the course of its 142-year history, and under the direction of succeeding Secretaries, the Institution has evolved into an eminent research center and the world's largest museum complex. In service to all mankind, its activities span the globe and are devoted to research, museology, and public education in the arts, sciences, and history.

The Smithsonian is a unique establishment which is both publicly supported and privately endowed, and whose governance is vested in an independent Board of Regents composed of federal officials, members of Congress, and private citizens. Donations from both the public and private sector increase its collections, and continuing additions to its trust funds expand and nourish the Institution's usefulness. Appropriations by Congress provide federal support for the Smithsonian's far-reaching services to the public. Annually hundreds of thousands of service hours are provided to the Institution by dedicated volunteers.

The Smithsonian conducts a wide range of programs in carrying out its broad goal of increasing and diffusing knowledge. One of its basic commitments is the conduct of original research in many fields. Another is the selective acquisition, management, care, exhibition, and security of collections that are also among the primary objects of its research. The Institution's holdings are a trust responsibility and serve as important assets for future generations. Related responsibilities include the maintenance of its buildings, facilities, and natural areas in Washington and other locations around the world.

In seeking to study and understand subjects of world importance, the Smithsonian participates in joint ventures with other organizations in the United States and on every continent. Fundamental data are assembled for use by planners and research workers in other organizations, both government and private, national and international in scope. Scientific, historical and art studies, which enhance human knowledge of the natural and cultural worlds and contribute to societal growth, are major endeavors. The results of the Institution's varied activities are disseminated to racially, ethnically, culturally, and economically diverse audiences through exhibitions, publications and other public media programs.

Most important to fulfilling the basic purpose of its founding benefactor, the Institution places the highest priority on achieving quality in the conduct of its activities while making the most effective use of available resources.

## EXHIBIT 2

### SMITHSONIAN INSTITUTION

#### Goals of the Institution

The Institution seeks to achieve its basic mission to increase and diffuse knowledge in the following ways:

- By pursuing research, collections management, exhibitions, publications, and other program activities devoted to helping explain -- for a wide range of audiences, and through the use of a wide range of media -- the present state of understanding of diverse fields of the arts and sciences as well as related problems or issues of contemporary importance.
- By giving special emphasis to exhibitions and other programs that will increase participation by culturally diverse communities, minorities, handicapped persons, senior citizens, and other specialized groups.
- By providing research, curatorial, and professional leadership and expertise of the highest quality, through emphasis on excellence of the staff and through maintaining and improving technical assistance, fellowship programs, equipment, and facilities.
- By promoting joint research, collections management, museum education, exhibition, and other interpretative programs with other domestic and foreign academic, research, and museum enterprises through a sharing of knowledge, expertise, exhibitions, collections, facilities and other resources.
- For the sake of future generations of scholars and visitors, by careful attention to the acquisition, care and preservation of collections and institutional facilities that house them, especially as related to protection, inventory, storage, building maintenance, equipping activities; and renovation of exhibit and other public areas.



- By dedicating research, exhibition, publication and other programmatic efforts to the long-term need for conservation and improvement of our natural and human resources, and drawing attention to the special responsibility each generation has to its successors.
- By maintaining management, administrative, and support services to meet program needs, by fostering strong internal financial and other management information systems and controls, by periodic assessments of current programs and support activities and related operating practices and procedures, and by orderly planning for new and renovated facilities for purposes of conducting research, collections management, education, and public related programs.

## EXHIBIT 3

### SMITHSONIAN INSTITUTION

#### Areas of Emphasis

#### A. Management Priorities.

- Endeavor to maintain effective communications between central and bureau management, encourage Institution-wide communications channels to permit new ideas for program and operating improvements to surface from all staff, and expand cooperative program efforts among bureaus with common interests.
- Continue efforts to improve staff quality, with particular emphasis on equal employment and affirmative action initiatives, by providing new opportunities for cross training among various offices, encouraging completion of high school education and/or advanced degrees, and supporting special training conducted by the bureaus and offices of the Institution.
- Critically evaluate all programs and support activities for purposes of discontinuing those that have outlived their usefulness or divesting them to other institutions, improving the quality of program products and delivery of services, and redirecting resources to more important efforts. Elevate management's use of information on spending and resource distribution patterns to facilitate analysis of relative resource needs.

#### B. Research and Research Support; Collection and Non-Collection Based.

- Enhance the Institution's overall scholarly environment by providing opportunities for scholarship through a variety of internal competitive programs, and encouragement in seeking outside support and joint programs, appointments, and cooperative efforts with other institutions.
- Increase bureau flexibility and responsibility for development efforts directed at museum and research initiatives in art, history and science areas.

- Provide for orderly planning and commitments for research instrumentation and facility development (STRI plan, SAO Whipple base camp, MMT conversion, submillimeter telescope).
- Fortify and balance biological and biodiversity research and associated technical support, especially among taxonomy, systematics, molecular biology, species propagation and other environmental areas of investigation.
- Recognize and promote generic museum issues as appropriate areas of academic pursuit and research, including, but not limited to, definitions of museum learning, advanced techniques in collection management, conservation, evaluation tools and experimentation in exhibition techniques, and the history and philosophy of museums.

C. Museum Management and Public Services.

- Continue to strengthen the physical care and management of collections, and related automated information systems for research and accountability;
- Produce and reinterpret exhibitions so that they appeal, enfranchise, and are understood by the broadest possible audience.
- Re-examine and change the exhibition process so that a team approach is implemented, systems of approval are streamlined and costs of exhibition development and production are reduced.
- Enhance visitor experiences and services based on researched demographics and needs.
- Examine and improve the balance of public programs as they relate to minorities, particularly Blacks, American Indians and peoples of Hispanic, Near Eastern and Far Eastern origins.
- Promote greater public understanding of other cultures, especially through the Columbus Quincentenary program, in order to provide a long term and lasting foundation for encouraging international cooperation and scholarly ex-

change with Latin America. Other areas of particular Institutional interest include the pursuit of international cultural understanding with the Near and Far East and the Soviet Union.

D. Facilities.

- Correct the backlog of deferred building maintenance and strengthen preventive maintenance programs. Accelerate renovation of exhibition space, especially with regard to opportunities for refurbishment of exhibitions in the NMNH. Continue with initial equipping of the Museum Support Center.
- Examine and pursue orderly scheduling and development of major renovations and new construction projects; develop an in-house facilities planning capability and review process that will translate institutional program objectives into a long range plan for major new facility needs, priorities, phasing and their costs, including the impact on annual operating expenses.

E. Administration.

- In order to successfully accomplish institutional program goals, alleviate operating and funding deficiencies in protection and plant services, safety and environmental programs and accounting, personnel and procurement activities.
- Investigate the costs of providing various services through contract arrangements, rather than through in-house channels and continue to undertake other appropriate management improvements studies.

F. General Development.

- Continue to examine and consider various realistic ways to increase basic trust resources of the Institution, including a general capital campaign, cultivation of donors, international markets, alternative investments, and expanded use of volunteers where appropriate.
- Examine and continue to pursue new product development, new auxiliary enterprise opportunities, and opportunities for collaboration that may exist among core revenue-producing programs.

## CHAPTER 2: SOURCES OF FUNDS

Funding sources available to the Smithsonian Institution divide into two broad categories: appropriated and nonappropriated. This chapter will briefly describe both categories, summarize the estimated resources available from each, indicate the primary uses for each type of funds, and profile the income producing activities of the Institution and their planned initiatives. Plans for Construction, Repair and Restoration of Buildings, and Construction and Improvements at the National Zoological Park appear in the Facilities Planning chapter.

Table 2-1 displays the Sources of Operating Funds available to the Institution for Fiscal Years 1990 through 1994. The Institution estimates that total net funds provided for operations (including overhead recovery) will grow from \$340 million in FY 1990 to \$435 million in FY 1994.

### Areas of Emphasis

Two of the areas of emphasis deal directly with general development of the Institution's Trust resources: the examination and consideration of various realistic ways to increase basic Trust resources of the Institution; and the examination and continued pursuit of new product development, new auxiliary enterprise opportunities, and opportunities for collaboration that may exist among core revenue-producing programs. These areas of emphasis will be primarily addressed through the planned activities of the Office of Membership and Development and the Product and Licensing Division of the Business Management Office.

### Appropriated Funds

The Federal government appropriates funds to the Smithsonian in separate accounts that correspond to the operating, and facilities construction and maintenance budgets that the Institution administers: 1) Salaries and Expenses (S&E); 2) Repair and Restoration of Buildings (R&R); 3) Construction and Improvements, National Zoological Park; and 4) Construction.

The S&E appropriation is the Smithsonian's basic Federal "operating" budget. For this reason, it is the only appropriated account included on Table 2-1. This appropriation meets the basic expenses of: research in the fields of art, science, and history; development, preservation, and documentation of the National Collections; presentation of public exhibits and performances; collection, preparation, dissemination and exchange of information and publications; conducting education, training, and museum assistance programs; administration; maintenance, alteration, operation, leasing, and protection of buildings and facilities.

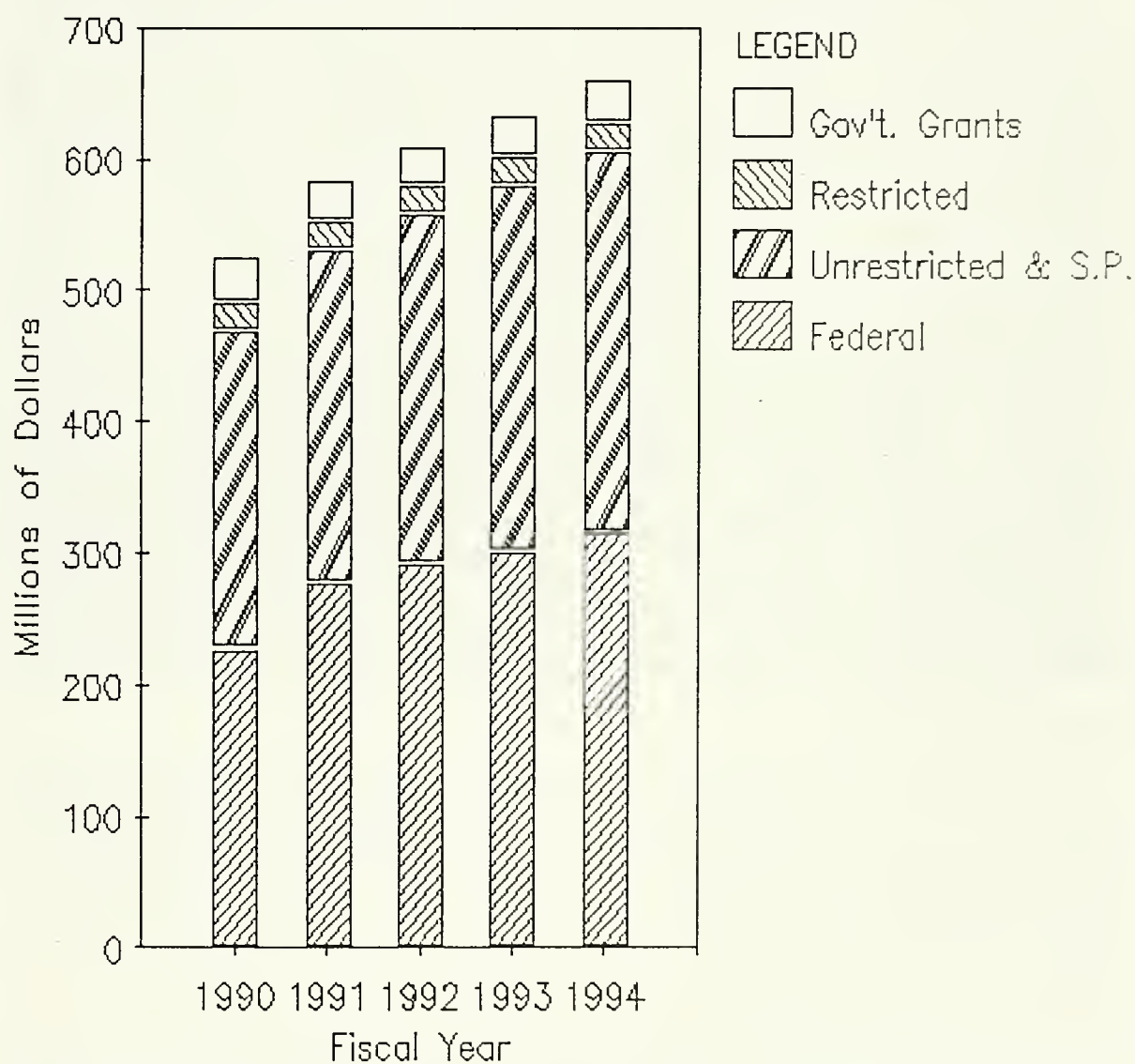
As shown on Table 2-1, the Institution estimates that its Federal Salaries and Expenses will grow from the requested FY 1990 level of \$228 million to \$316 million in FY 1994.



TABLE 2-1  
SMITHSONIAN INSTITUTION  
SOURCE OF OPERATING FUNDS  
FISCAL YEARS 1990 THROUGH 1994  
(Thousands of Dollars)

SOURCE OF OPERATING FUNDS	<u>FY 1990</u>	<u>FY 1991</u>	<u>FY 1992</u>	<u>FY 1993</u>	<u>FY 1994</u>
Federal Salaries & Expenses	\$227,737	\$266,640	\$274,558	\$278,369	\$286,078
Plus cumulative effect of legislated pay changes	--	11,100	17,200	23,400	30,400
SubTotal	<u>227,737</u>	<u>277,740</u>	<u>291,758</u>	<u>301,769</u>	<u>316,478</u>
Nonappropriated Trust Funds					
Unrestricted General					
·Investments	6,100	6,200	6,300	6,400	6,500
·Gifts/Miscellaneous	1,600	1,800	2,000	2,000	2,200
·Auxiliary Activities	203,555	214,625	226,121	236,955	248,108
·Overhead Recovery	15,970	16,675	16,850	17,100	17,450
Subtotal	<u>227,225</u>	<u>239,300</u>	<u>251,271</u>	<u>262,455</u>	<u>274,258</u>
Unrestricted Special Purpose					
·Investments	800	900	900	900	900
·Gifts	200	300	300	300	200
·Bureau Activities	11,966	12,517	13,048	13,681	13,363
·Miscellaneous	2,110	1,829	1,844	1,834	1,749
Subtotal	<u>15,076</u>	<u>15,546</u>	<u>16,092</u>	<u>16,715</u>	<u>16,212</u>
Restricted					
·Investments	6,616	6,672	6,702	6,701	6,715
·Gifts, Grants and Contracts	14,309	13,484	14,162	14,182	14,535
·Miscellaneous	1,000	1,000	1,000	1,000	1,000
Subtotal	<u>21,925</u>	<u>21,156</u>	<u>21,864</u>	<u>21,883</u>	<u>22,250</u>
Government Grants and Contracts	<u>34,563</u>	<u>30,943</u>	<u>30,358</u>	<u>30,886</u>	<u>33,484</u>
Gross Income	<u>526,526</u>	<u>584,685</u>	<u>611,343</u>	<u>633,708</u>	<u>662,682</u>
Less Expenses of Auxiliary and Bureau Activities	<u>(186,525)</u>	<u>(196,523)</u>	<u>(206,250)</u>	<u>(217,274)</u>	<u>(228,113)</u>
Net Funds Provided	<u>340,001</u>	<u>388,162</u>	<u>405,093</u>	<u>416,434</u>	<u>434,569</u>

Chart 2-1  
Source of Gross Operating Funds  
Fiscal Years 1990 - 1994



## Nonappropriated Funds

While Federal appropriations provide core support for the Institution's programs, nonappropriated funds from various sources are vital to Smithsonian activities. There are two sources of nonappropriated funding: Smithsonian Trust funds and Government Grants and Contracts. Smithsonian Trust funds derive from a variety of sources, including gifts and grants received from individuals, corporations, and foundations, earned revenues of the auxiliary and bureau activities, non-Government contracts, and investment income received on balances of the various types of nonappropriated funds. Government agencies provide the Smithsonian with government grants and contracts to support specific research, exhibits, or other projects which the Institution undertakes as a result of its expertise or its ability to respond quickly to certain kinds of needs.

### Major Income-Producing Activities

The Institution derives Unrestricted Trust Income from a variety of auxiliary and bureau activities. The major income producing activities provide a diverse range of services to the Institution's various audiences, make the activities of the Smithsonian more accessible, and enhance the quality of educational experiences available to the general public. Projections of the income from these activities, and the expenses incurred in producing that income, appear in Table 2-1. A brief description of the anticipated major income producing activities during the planning period follows.

#### Smithsonian National Associate Program

The National Associate Program (SNAP) derives income from three primary sources: the Contributing Membership Program, lectures and seminars, and the Associates Travel Program. SNAP's Contributing Membership Program will begin FY 1989 with more than 47,000 members. Through new acquisition, maintenance, and upgrade strategies, the Contributing Membership will increase to a projected 80,000 in FY 1994. During the planning period, SNAP will undertake a major effort directed at Contributing Members, and to raise funds for the Museum of American Art's Inventory of American Sculpture project. Additionally, SNAP's Lecture and Seminar Program will work closely with the Office of Membership and Development and the National Board of Smithsonian Associates to solicit major gifts from donors throughout the country.

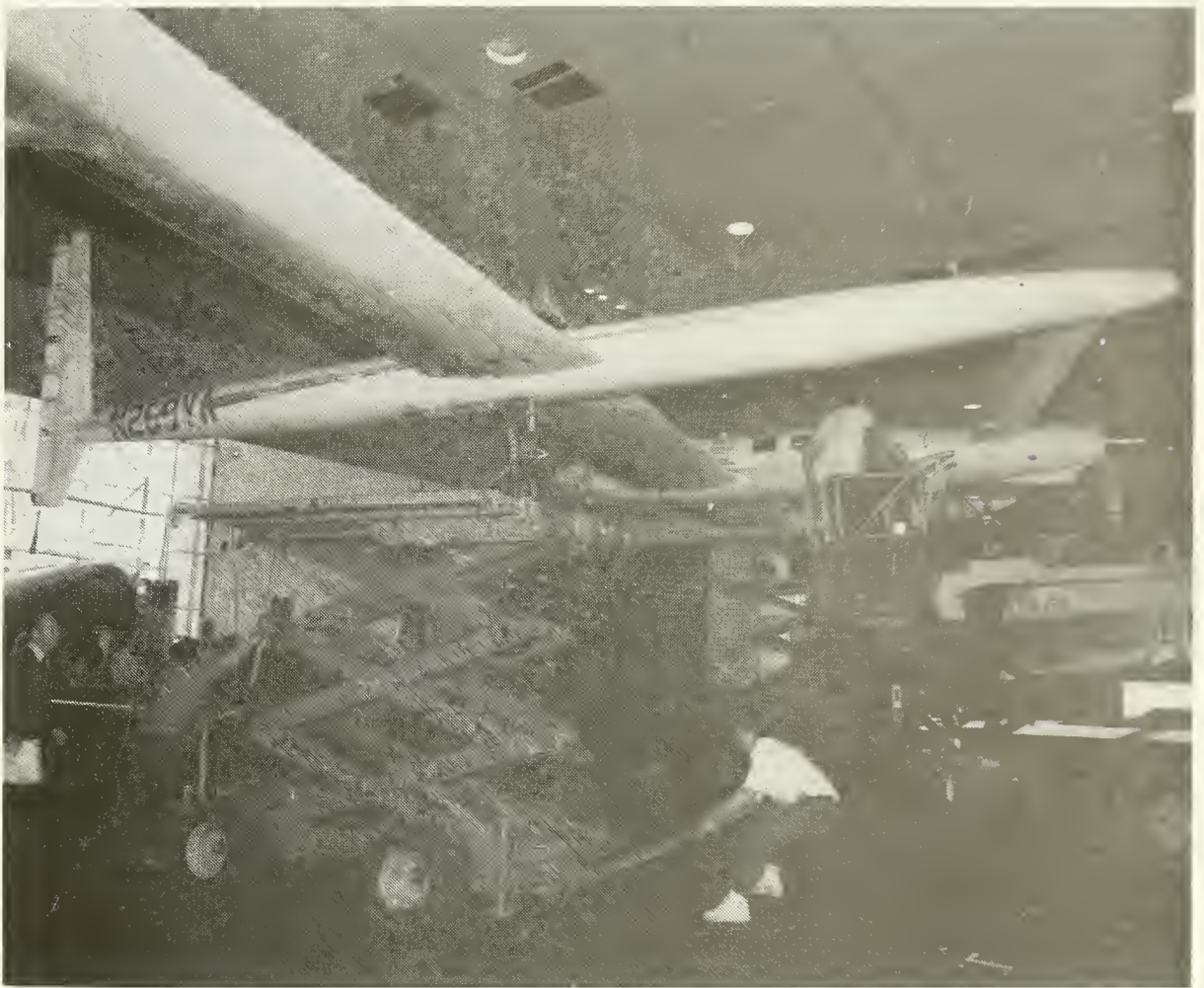
#### Resident Associate Program

The Resident Associate Program (RAP) derives income from four primary sources: membership, registration, performing arts, and Discovery Theater. RAP serves a membership of 60,000 households, equaling approximately 150,000 individuals in the Washington Metropolitan area. To generate new memberships, RAP is increasing direct mail efforts and advertising, especially directed to minority populations. Memberships should total 75,000 households by 1994.

#### Office of Membership and Development

To help meet the need for increased private funds in future years, the Institution plans to increase its development staff during the planning period. This increase will take place both in the Office of Membership and Development (OMD) and at the bureau





The Voyager flew around the world nonstop in less than ten days and without refueling; however, it took several men and three mighty lifts to hoist the craft into the exhibit which the National Air and Space Museum (NASM) opened December 14, 1987 on the flight's one year anniversary. (photo by Mark Avino)

level. The Institution will encourage individual museums and offices to pursue direct support for their programs. The OMD will solicit funding for pan-Institutional projects and for multi-bureau projects as well as assist those bureaus without separate fund-raising staff.

The OMD will continue to coordinate development activities across the Institution, in line with the Institution's recent decentralized fund-raising focus. It will also provide specialized development services, such as planned giving, for the entire Institution. The OMD will work with the Development Committee, a group comprised of Institution's senior management, to set development priorities and address related fund-raising policy issues.

#### *Smithsonian Magazine*

The *Smithsonian Magazine* has been one of the most successful public education ventures established by the Institution. Astutely aware of the vicissitudes of publishing, the Magazine's management nonetheless expects demand for its product to remain strong. Revenues from the magazine meet the cost of production first, with net proceeds distributed to the General Unrestricted Trust Fund.

#### *Air and Space Magazine*

The *Air and Space Magazine* explores human endeavor in flight and in exploration, science, and research within the atmosphere and beyond. *Air and Space's* management projects operating losses during the first three years of publication but expects to recover these during FY 1993. After that time the magazine should produce a net gain.

#### Smithsonian Institution Press

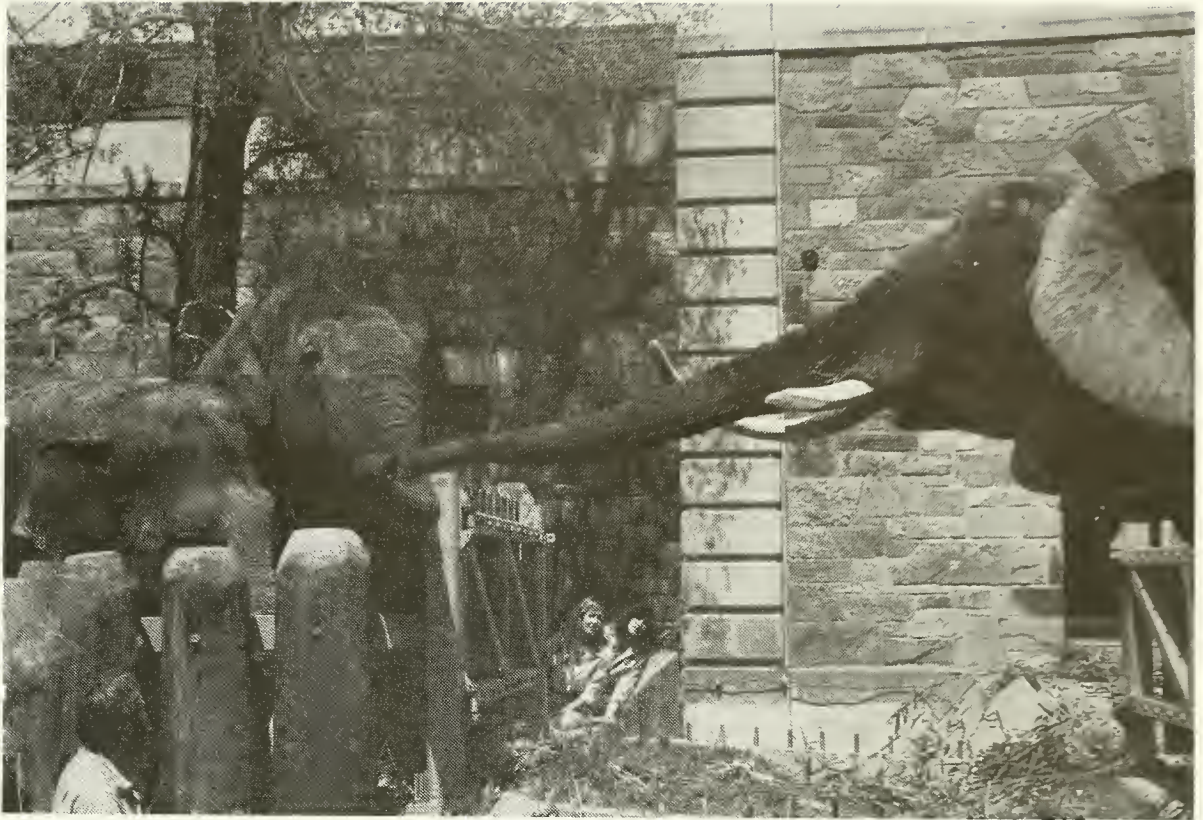
The Smithsonian Institution Press is a vital information dissemination activity. Its customers include libraries, museums, scientific institutions, and the general public. The Press designs exhibition catalogues, educational pamphlets, and informational leaflets that serve the Institution's millions of visitors and its extensive programs. It publishes high quality scholarly and general interest books, together with recordings which preserve significant developments in the history of American music. The Press expects to continue to perform successfully with some net gains each year from the production and sales of its products.

#### Museum Shops

The Smithsonian has provided sales desks since the 1860s, offering a diverse array of Institution related products. Centrally managed Museum Shops operate in the Museum of American History, the Museum of Natural History, the Arts and Industries Building, the Air and Space Museum, the Hirshhorn Museum and Sculpture Garden, the Museum of American Art, the Portrait Gallery, the Renwick Gallery, and the Museum of African Art in the Quadrangle. Shops managed by individual Museums include the Freer Gallery and the Cooper-Hewitt Museum.

Each item offered for sale in a museum shop must relate to the collections, be appropriate to the museum where sold, and conform to high standards of quality and taste. Exhibition catalogues and other publications consonant with exhibition themes,





The Zoo's African elephant Nancy (pictured on the right) had begun to restlessly pace in a circle in her enclosure; she underutilized her outside yard, preferring to stay inside where she would have more human contact; and she would bang against her bars and throw things, obviously as a means of getting attention. Elephant handlers concluded that she was lonely; however the only other elephants at the zoo were the Asian elephants, Ambika (far left) and Shanti (center), who lived at the other end of the elephant house.

Although from different species and genera, African and Asian elephants have shared quarters at other zoos; in fact, there has been one live birth resulting from such cohabitation. Zoo personnel have gradually moved the elephants closer together until they are now in adjoining pens. The three females, who in the wild would live in matriarchal herds, have begun to display appropriate herd behavior, for instance, vocalization and touching upon greeting. Once Zoo officials trim Nancy's excessively long right tusk, which she has used as a weapon in the past, the elephant handlers anticipate they can quarter the three elephants together. This arrangement will save elephant keepers from having to divide their time between the two elephant areas and allow them more time to work with all the elephants. (photo by Jessie Cohen)

plus all works by Smithsonian scholars, are available in the museum shops. Other offerings include reproductions of three dimensional artifacts, handcrafts, and educational materials for children.

#### Mail Order Division

Formed in 1975, the Mail Order Division produces several catalogues each year. Sent to Associate members, these catalogues offer special items selected to reflect Smithsonian collections and programs. Items are chosen for their quality, taste, and educational value. The Division's receiving and shipping center is located in Springfield, Virginia.

#### Product Development and Licensing

The Product Development and Licensing Division, formed in 1985, licenses major manufacturers to produce and market reproductions and Smithsonian-related product lines. The Smithsonian now has over 50 licensees, representing approximately 250 products bearing the Smithsonian name. The majority of the products retail through the Museum Shops and the Mail Order Catalogue. Continued growth of the Product Development and Licensing Division will increasingly promote the Smithsonian via quality educational reproductions and adaptations.

#### Concessions

Through concession arrangements, the Institution provides visitors with restaurant facilities in major Smithsonian museums, including an old-fashioned ice cream parlor in the Museum of American History. The new NASM restaurant opened in September 1988. Other activities run by concessionaires are the popular carousel and popcorn wagons on the Mall during the spring and summer, recorded tour rental systems, and the shop, restaurant, and parking facilities at the Zoo.

#### Bureau Activities

Bureau Activities in the Institution function primarily as support for their bureau. Most notable is the Langley Theater at the National Air and Space Museum.

### CHAPTER 3: USES OF FUNDS, SUMMARY

The Institution uses its Federal appropriations and Trust funds for five broad categories of activities: Research and Curation; Exhibitions; Education; Administrative, Financial and Other Support Services; and for Facilities Planning, Construction, Restoration and Renovation. This chapter describes total gross resources projected to be available for application to operating expenses of Institutional programs. Facilities Planning, Construction and Restoration and Renovation efforts are described in Chapter 8.

#### Projected Uses of Operating Funds

In total, the Institution's gross operating resources will grow from \$527 million in FY 1990 to \$663 million in FY 1994 (before application of overhead recovery). Of these amounts, \$187 million and \$228 million respectively, represent the expenses of the Auxiliary and Bureau activities. In net terms, the Institution will apply \$340 million in FY 1990 and \$434 million in FY 1994 to fund its various activities, including transfers to the endowment and to enhancement of current funds of approximately \$5 million to \$7 million per year. Table 3-1 shows the annual projections of gross operating funds by program category.

#### Federal Appropriations

Federal appropriations for program operations will grow from \$228 million in FY 1990 to \$317 million in FY 1994. In FY 1990, \$86 million (38 percent) of Federal operating funds will be used for research and curation activities, \$16 million (7 percent) for exhibition programs, \$9 million (4 percent) for educational programs, and \$116 million (51 percent) for administrative, financial and other support services, including those associated with bureaus, central offices and facilities operations.

Included in the projections for administrative, financial and other support services are the projections of uncontrollable costs. These include: utilities, inflation, necessary pay, health insurance requirements and supplemental pay requirements. In FY 1994, these uncontrollable costs will total \$53 million of the growth in federal operating resources projected over the period.

#### Unrestricted Trust and Special Purpose Funds

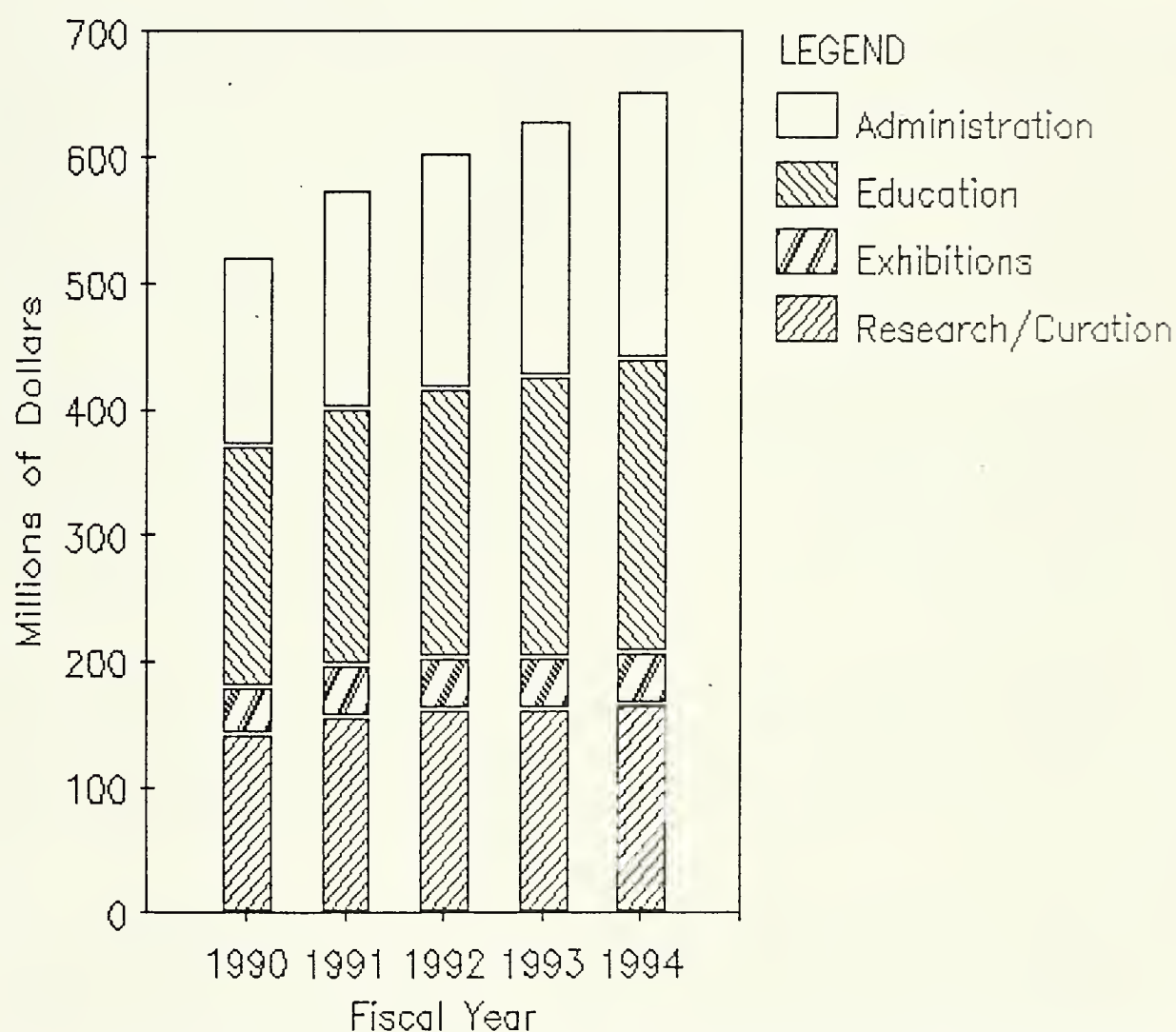
The gross cost of programs supported with Unrestricted Trust and Special Purpose funds will grow from \$239 million in FY 1990 to \$286 million in FY 1994. In FY 1990, \$18 million (7 percent) will be dedicated to research and curation, \$9 million (4 percent) to exhibitions, \$183 million (77 percent) to educational programs, and \$29 million (12 percent) to administrative, financial and other support services. The projections include the expenses of the Auxiliary and Bureau activities.



TABLE 3-1  
SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS BY PROGRAM CATEGORY  
FISCAL YEARS 1990 THROUGH 1994  
(Thousands of Dollars)

	<u>FY 1990</u>	<u>FY 1991</u>	<u>FY 1992</u>	<u>FY 1993</u>	<u>FY 1994</u>
Federal Funds:					
Research/Curation	\$86,448	\$107,664	\$109,385	\$110,142	\$111,433
Exhibitions	16,222	20,239	19,766	18,323	17,668
Education	8,906	10,540	10,694	10,380	10,405
Admin., Financial and Other Support	116,161	139,297	151,913	162,924	176,972
Sub-Total:	<u>\$227,737</u>	<u>\$277,740</u>	<u>\$291,758</u>	<u>\$301,769</u>	<u>\$316,478</u>
Unrestricted and Special Purpose					
Research/Curation	\$17,656	\$18,508	\$19,775	\$20,168	\$19,956
Exhibitions	9,300	9,585	9,770	10,168	10,320
Education	182,599	192,692	201,890	212,494	223,589
Admin., Financial and Other Support	29,410	29,914	31,513	34,254	31,921
Sub-Total:	<u>\$238,965</u>	<u>\$250,699</u>	<u>\$262,948</u>	<u>\$277,084</u>	<u>\$285,786</u>
Restricted Funds					
Research/Curation	\$6,462	\$5,420	\$5,809	\$5,549	\$5,904
Exhibitions	9,088	8,821	8,966	8,630	9,110
Education	203	189	181	176	171
Admin., Financial and Other Support	4,062	4,581	4,643	4,832	4,483
Sub-Total:	<u>\$19,815</u>	<u>\$19,011</u>	<u>\$19,599</u>	<u>\$19,187</u>	<u>\$19,668</u>
Government Grants and Contracts					
Research/Curation	\$31,583	\$27,706	\$27,020	\$26,943	\$30,184
Exhibitions	2,958	3,237	3,338	3,943	3,300
Education	0	0	0	0	0
Admin., Financial and Other Support	22	0	0	0	0
Sub-Total:	<u>\$34,563</u>	<u>\$30,943</u>	<u>\$30,358</u>	<u>\$30,886</u>	<u>\$33,484</u>
Gross Funds Applied	<u>\$521,080</u>	<u>\$578,393</u>	<u>\$604,663</u>	<u>\$628,926</u>	<u>\$655,416</u>
Plus Transfers and Change in Fund Balance	5,446	6,292	6,680	4,782	7,266
Less Expenses of Auxiliary and Bureau Activities	(\$186,525)	(\$196,523)	(\$206,250)	(\$217,274)	(\$228,113)
Total Net Funds Applied	<u>\$340,001</u>	<u>\$388,162</u>	<u>\$405,093</u>	<u>\$416,434</u>	<u>\$434,569</u>

Chart 3-1  
Application of Gross Operating Funds  
By Program Category  
Fiscal Years 1990 - 1994



## Restricted Trust Funds

Restricted Trust fund support for various programs is difficult to project in the long-term because these funds originate largely from gifts, grants, and donations from the private sector (especially for exhibitions) and other general support of bureau activities. In FY 1990, \$6 million (31 percent) will be used for research and curation programs, \$9 million (47 percent) will be used for exhibitions, \$203,000 (1 percent) for education programs, and \$4 million (21 percent) for central and bureau administrative, financial and other support programs. The Institution projects stability of these funds for the support of various operations.

## Government Grants and Contracts

The potential for future support from external granting agencies is difficult to predict reflecting in part the funding uncertainty of these agencies during a time of fiscal austerity. The Institution projects stability also for these funds over the period at this time as a source of support for research and other operations.



## CHAPTER 4: RESEARCH AND CURATION

The Smithsonian, by virtue of its staff, collections, data bases, and research facilities, is a unique international resource in the basic sciences, arts and the humanities. The Smithsonian's long-term research efforts complement Industrial, federal, and university research and provide critical continuity to the nation's research enterprise in a number of fields. The Institution's systematists, for example, provide the fundamental knowledge that supports further research in ecological and evolutionary sciences. In addition to serving the broad research community, Smithsonian research is the basis for many of the Institution's public activities. The accuracy and currency of its exhibitions, the care of its collections, and the quality of its public education programs depend directly on the research and curatorial activities of the staff.

Various Smithsonian bureaus and museums engage in research and curation efforts. Research is the principal activity of the Astrophysical Observatory, Tropical Research Institute, the Environmental Research Center, and the Conservation Analytical Laboratory. Research is a highly important component in the Museum of Natural History, Air and Space Museum, the Zoological Park, and the Museum of American History, where exhibitions, education, and care of collections are additional responsibilities. The same is true in the Freer Gallery of Art, the Arthur M. Sackler Gallery, the National Museum of American Art, and the other Smithsonian art museums, where curators exercise their intellectual talents and professional judgement in curating collections, preparing exhibitions, and developing education and public programs.

This chapter describes resources, whether general, or specialized and technical, which support researchers and curators. Resources include activities that relate to basic scientific research or collections research and management; lead to exhibitions; or involve educational and other public service activities. Research and curatorial activities are basic to many other museum functions. For example, on any particular project a curator could spend time preserving and storing an important artifact, producing an exhibit and catalogue, preparing a professional article for publication, supervising a fellow or intern, or presenting a public lecture.

This chapter discusses such specialized research and curatorial support activities as the Institution's Libraries, Archives, the Office of the Registrar, Office of Fellowships and Grants, and the Museum Support Center. This chapter also includes specialized programs development of Major Scientific Instrumentation and the research grants available from Unrestricted Trust Funds, such as the Regent's programs, or from Restricted Trust Funds, such as income from the Freer Gallery endowment.

### Areas of Emphasis

The principal areas of emphasis relevant to research/curation programs, for the next five years include: fortifying and balancing biological and biodiversity research and associated technical and specialized support; providing for research instrumentation and facility development; and advancing the physical care, conservation, management, and storage of collections and related automated information systems. Emphasis on these efforts will enhance the Institution's scholarly environment, both for its own staff and outside scholars.



Many people know that rising levels of carbon dioxide cause the greenhouse effect which, in turn, will increase temperatures worldwide. Not as many know that the same increased levels of carbon dioxide are also responsible for increased growth of plants.

A Smithsonian Environmental Research Center (SERC) project, which Dr. Bert Drake (pictured) directs, tests the effects of increased carbon dioxide upon wild plants and ecosystems. The field study's preliminary findings, reported in April-November 1987, corroborate previous laboratory findings that plants respond to elevated carbon dioxide levels by absorbing more carbon from the air and using less water.

The surprising observation of this Department of Energy-funded study is that irrespective of individual plants' or species' response to increased carbon dioxide, the growing season of the whole ecosystem lasts longer when carbon dioxide levels increase. The lengthening of the growing season suggests that ecosystems may be able to absorb even more carbon dioxide than scientists initially anticipated.

The Chesapeake Bay marshlands, which are SERC's domain, are particularly suitable for this study because the plants there are easy to isolate in the pictured enclosures and marsh plants, like most wild vegetation on earth, are perennials.

## Projected Resources

As Table 4-1 and Chart 4-1 show, Federal S&E appropriations in FY 1990 are the primary source of funds for research and curation, constituting approximately 61%; Institutional Unrestricted and Restricted Funds represent approximately 17%. Grant and Contracts represent approximately 22%. These proportions have been relatively stable over the past few years, but are subject to change over time depending upon the approval of appropriation requests, the performance of the revenue-producing activities of the Institution, and the ability of the Institution to obtain additional grants and contracts and funds from private donors. The projections in Table 4-1 are before application of overhead recovery.

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**TABLE 4-1**

**PROJECTED RESOURCES FOR RESEARCH AND CURATION PROGRAMS**

(Thousands of Dollars)

<u>SOURCE OF FUNDS</u>	<u>FY 1990</u>		<u>FY 1991</u>		<u>FY 1992</u>		<u>FY 1993</u>		<u>FY 1994</u>	
	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>
Federal S & E	1,520	86,448	1,675	107,664	1,717	109,385	1,741	110,142	1,759	111,433
Unrestricted and Special Purpose	115	17,656	118	18,508	118	19,775	114	20,168	110	19,956
Restricted	33	6,462	25	5,420	27	5,809	27	5,549	27	5,904
Government Grants and Contracts	153	31,583	146	27,706	137	27,020	125	26,943	107	30,184
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Total	1,821	142,149	1,964	159,298	1,999	161,989	2,007	162,802	2,003	167,477

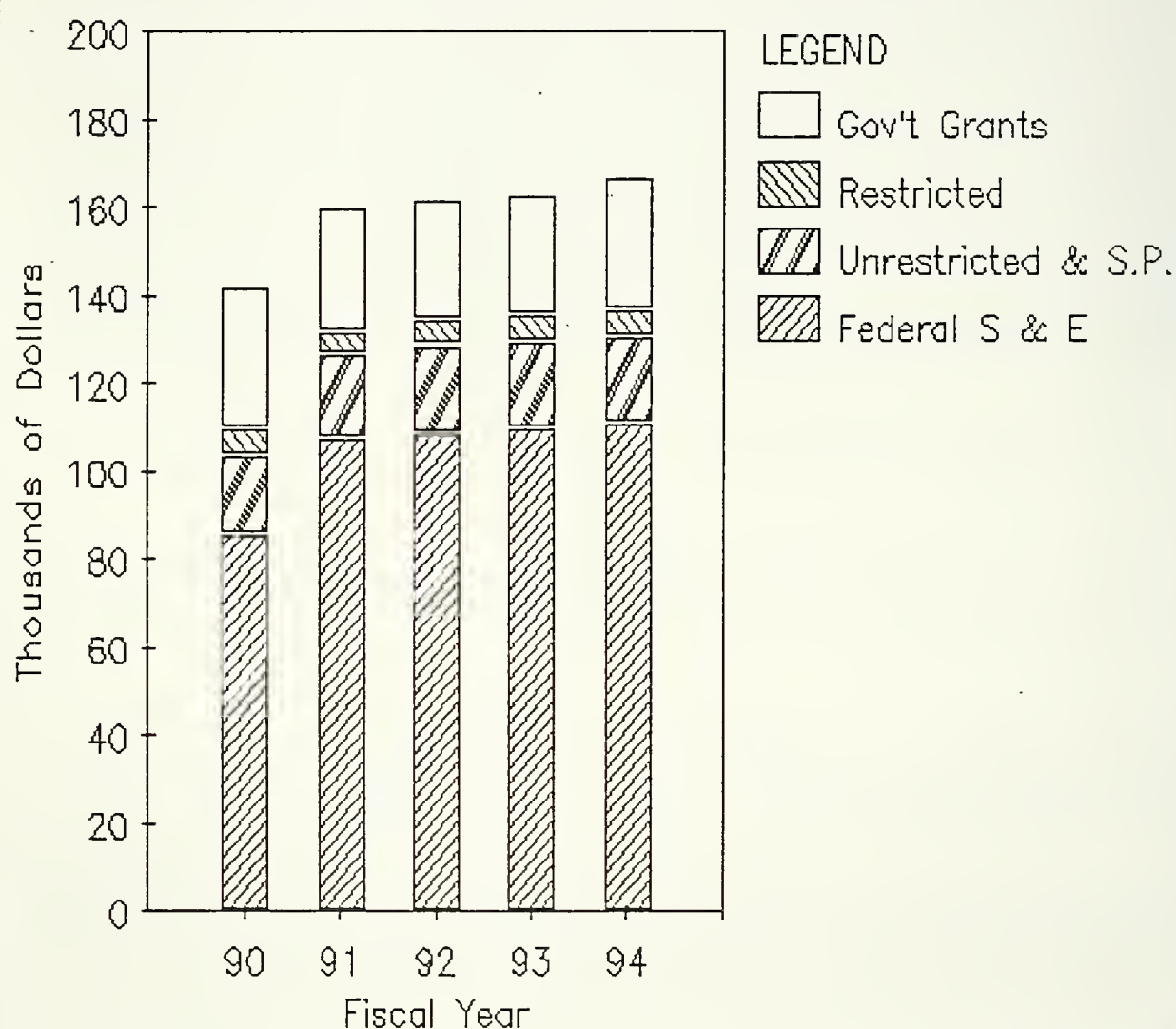
## Research and Curation Highlights

### Biodiversity and the Environment

Within the last several years, policy makers have paid considerable attention to the accelerating pace of destruction of tropical forest ecosystems. Various scientific disciplines recognize these areas as being the "cradle of life;" they serve an important role in preserving the global environmental balance and genetic diversity. Researchers also can find materials for new foods and medicines in these now beleaguered regions.



Chart 4-1  
Projected Resources for  
Research and Curation Programs  
Fiscal Years 1990 - 1994





At the Khao Kheow Zoo in Thailand, in a session of the National Zoo's "Biology and Animal Management Training Course" for developing countries, the Zoo's assistant Curator of Birds Charles Pickett (center) demonstrates methods of applying leg and wing bands to Brahminy kite. For three and one half weeks in November and December of 1987, Pickett and Assistant Director for Conservation Christen Wemmer discussed zoo organization, staff development, record keeping, animal identification, collections planning, transporting animals, equipping animal facilities, chemical immobilization, and other animal health topics with curators, veterinarians, and directors from Thailand's three major zoos.

The 'SI International Activities' Exchange Program funded the Thai sessions. The Pew Charitable Trust and the U.S. Agency for International Development will fund future training in Malaysia, Brazil, Pakistan, Sri Lanka, Ecuador, Argentina, Indonesia, and Burma.

By bringing Western and non-Western zoo officials together as professional colleagues, programs such as the Zoo's training course help zoos in developing countries promote conservation awareness through more effective animal management and exhibition. (photo by Christen Wemmer)





Paca project manager Ofelina Brown poses at the Smithsonian Tropical Research Institution (STRI) with captive-born pacas, large rodents indigenous to Central and South America. STRI's pilot project attempts to domesticate the pacas for use as small farm animals and as a protein source.

Initial efforts to tame these rodents have been successful. Now researchers must determine whether successive generations inherit domestication.

Continued destruction of these areas results in more rapid extinction of species, most of which are yet undescribed, and may even threaten continued human existence. It is critical to understand the tropics (what plants and animals are there now, how they evolved, and how they relate to one another); however, we will comprehend little if the tropics continue to be destroyed.

The Tropical Research Institute (STRI) will continue its pioneering studies in tropical biology at the Barro Colorado Island Nature Monument and its two marine research stations in Panama. During the planning period, STRI plans to enhance its capabilities in plant physiology and molecular evolution; with funding provided in FY 1988-89, STRI is establishing a research program in these fields as applied to the tropical environment. Another related objective is to eventually complete all facilities contained in its master construction plan.

The National Zoological Park will continue to expand environmental research activities in the tropics, especially its successful efforts in reintroducing zoo-bred primates, representing endangered species, to their original habitats in Brazil. The Zoo's earlier pioneering experiments with domestic cats have paved the way for the use of expanded in-vitro techniques for artificial reproduction with endangered species of wild cats. The Zoo has been successful raising some private funds to finance projects of this type and efforts will continue to ensure their long-term stability.

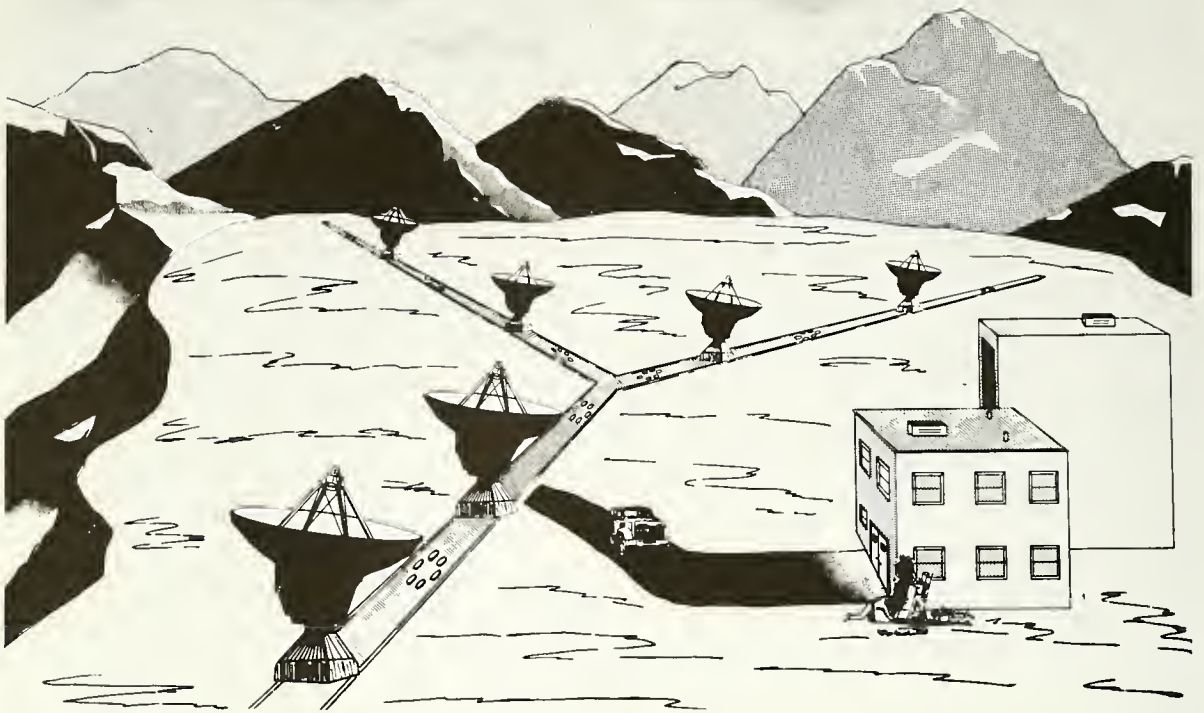
The Smithsonian, because of its collections, staff and field stations, has an excellent vantage point from which to pursue extensive research in these areas and in related environmental problems spanning the tropics and arctic regions. For example, scientists from the Museum of Natural History will proceed with a program initiated in FY 1987 exploring and documenting biological diversity in Latin America, through which they will conduct a comprehensive survey of Amazonian flora and fauna. This effort will have an important training component for both South and North American students. The Arctic Research and Policy Act of 1984 reflects national interest in the Arctic, and partly as a result of this interest, the Museum of Natural History is expanding its own Arctic research in archaeology, anthropology, and biology, traditional areas of Museum competence. The Museum continues to assess the feasibility of a National Biological Survey for temperate North America; systematic biologists throughout the country would participate in this long-term project.

#### Major Scientific Instrumentation and Laboratory Equipment Initiatives

Increasingly necessary to the support of modern basic scientific research is the regular replacement of equipment and the acquisition of new state-of-the-art instruments. Such replacement and upgrading accounts for much of the projected growth in research and curatorial support to be requested as federal appropriations. Plans for the Astrophysical Observatory's development of the submillimeter telescope array and conversion of the multiple mirror telescope exemplify this upgrading.

Because of the magnitude of the costs involved in the alteration or reconfiguration of existing major instrumentation and in the fabrication of new instrumentation, such projects will, of necessity, require extended development as well as multi-year funding. In FY 1989, Congress approved funds for Major Scientific Instrumentation as available until expended. Institutional decisions about levels and scheduling of necessary funding through the special scientific instrumentation account will determine future rate of





Slated for development over the next several years, depending upon funding, the Smithsonian Astrophysical Observatory's submillimeter telescope would enable astronomers to observe the largely unexplored electromagnetic spectrum which is below visible light and between radio and infrared waves but which is important because it represents the invisible emissions of the ice halos of comets, the molecular clouds which can become stars, and the swirling disks of dust and gas that can form planetary systems. Astronomical sources which emit mostly submillimeter radiation are "cool objects," having average temperatures near absolute zero (-459.673 Fahrenheit). Space probes are currently the only means of exploring such cool objects in our own solar system.

SAO's submillimeter telescope would consist of six movable six-meter-diameter telescopes mounted on tracks, each several hundred meters. Together the instruments would comprise an virtual Interferometer in which the separate Instruments work together to create the equivalent of a single telescope with a resolution 30 times better than any one of the individual instruments. (artist's rendition)



development for both projects. The conversion of the Multiple Mirror Telescope may be completed by 1993. Completion of the submillimeter array is expected by the mid-1990's.

As described earlier, the Smithsonian anticipates the continued development of a research program in molecular systematics and evolution. Recent technical advances in DNA sequencing, electrophoresis and chromatography have opened new ways to study the evolutionary process in plants and animals. To take advantage of these new techniques, the Institution plans to expand, during the planning period, a multi-bureau effort to equip and staff laboratories at the Museum of Natural History, the Tropical Research Institute, and the Zoological Park with the necessary equipment to advance this new approach.

Much of the other growth, federal and trust, provides technical and clerical help, laboratory and other specialized equipment and systems for a number of bureaus and offices. Because of the importance of such continual replacement and upgrading of equipment, major Institution-wide efforts must continue.

### Collections Management

The Smithsonian will continue to develop and install a collections information system using automated technologies for information retrieval, object control, and data management. Smithsonian managers view timely, accessible, and meticulous collections records as necessary for the prudent management of the Nation's patrimony. The Institution's challenge in the future is to move ahead with installation of a collections management system in a national budget environment where adequate resources may not be available.

As part of the Institution's collections stewardship in the future, during the planning period the Smithsonian will emphasize improved collections storage, improved access to collections for scholarly research, and continued development of collections information retrieval systems. The Museum of Natural History staff will continue to increase and refine the Museum's collection data base; the Museum remains committed to a sound, collection management program that will guarantee better, safer care and easier access to the collections. The Museum of American History's main objective for 1990-94 is to make the collections more accessible for both research and education purposes; important objectives include the development of new publications and other materials based on the collections, and continued development of computerized data bases. In addition, the American History Museum will improve its archival facilities for the recently acquired Duke Ellington collection and other major acquisitions, such as the De Vincent collection of sheet music.

Pioneering the use of laser-readable discs, the Air and Space Museum has started a long-range program to store its archival photographs on this medium. The Museum already has successfully videodisc'd over 500,000 air and space photographs. These are available to the public and other museums.

Collections storage solutions will also be explored during the planning period. Continued acquisitions in the art and history community have resulted in a current shortage of storage space thus limiting accessibility for research. Proper storage of collections will require new facilities. Space and storage difficulties face the Air and Space Museum because of the large size of the Museum's acquisitions. Potential solutions

to the collection storage problems are discussed in Chapter 8, Facilities Planning, Construction, Repair and Renovation.

### Publications

Because research and curation in the science, history and art museums produce exhibit catalogues and other scholarly works, museums are interested in coordinating efforts to disseminate these scholarly materials more widely. One major step in this direction is the new journal, *Smithsonian Studies in American Art*, produced by the Museum of American Art. The journal features articles from throughout the Institution and elsewhere offering new interpretations and research in the field of American art. With three issues published in 1988, the Museum plans quarterly publication in 1989. Also, the Hirshhorn Museum and Sculpture Garden plans to research, publish articles about, and assist other museums and outside scholars in researching the works of art in the collection.

The Sackler Gallery journal, *Asian Art*, published in association with the Oxford University Press, will continue to publish research on a wide range of Asian art topics. Both the Freer and Sackler are making concerted efforts to develop greater communication and coordination of research with the scholarly community.

### International Research Collaboration

The recently created International Center will serve to monitor, coordinate, and enhance Smithsonian-wide international endeavors in research, exhibition, and educational activities over the planning period. The International Activities Council, chaired by the Assistant Secretary for Research and including the Assistant Secretaries of Museums, Public Service, and External Affairs, oversees the Center. The Center consists of several independent activities including the Office of International Relations, the International Gallery, the Office of Quincentenary Planning, and the Office of Conference Services. The Center also includes several international research programs, such as UNESCO's Man and the Biosphere Program, and the Council of American Overseas Research programs.

### Conservation

At the Conservation Analytical Laboratory (CAL) archaeometric research through physical and chemical techniques focuses upon artifacts and other materials and addresses archaeological and art historical questions. A goal for the next five year period is the development of the program in biogeochemistry. Other research endeavors which the Laboratory plans to develop are studies in the conservation of photographic materials, the mechanical properties of museum objects and the materials from which they are made, and the interaction of painting cleaning agents with the underlying paint films.

### Research Support

The Office of Fellowships and Grants administers the Institution's fellowship programs and visiting academic appointments and internships. A high priority program of the Institution designed to enhance the scholarly environment, this Office is funded largely through trust resources except for most administrative staff costs. During the planning period, fellowships and grants will increase, if the revenue-producing activities of the Institution continue to perform in a satisfactory fashion, allowing for larger stipends and more varied types of appointments and awards. The Institution also plans



Consisting of 152,000 color slides, approximately 76,500 black and white prints, and 120,000 feet of unedited color motion picture film, as well as vintage maps and engravings, the Eliot Elisofon Photographic Archives documents African art and cultural history. For example, the photo at left shows one of a pair of gold earrings crafted by the Mali's Fulani peoples and held by the National Museum of African Art. In the bottom photo, Elisofon shot in Mali, a Fulani woman wears a similar pair.



A bequest from *Life* magazine photographer, Eliot Elisofon, who spent more than 25 years photographing Africa and its people, became the foundation for the archives which now comprises over 130 photographic collections. The archives became part of the Smithsonian collections in 1979. Its visual resources are even more accessible to researchers and the general public since the archives' new facilities opened last fall in the Museum's Quadrangle Building.



increases for the prestigious Regents Fellowships. The Institution offers these awards to scholars of distinction to conduct in-residence studies of major importance. Continued increases in trust funding will permit expansion of the program, particularly to include two and three year post-doctoral awards. A highly successful short-term Visitor and Workshop program will continue. The Office administers the Cooperative Education Program, Minority Internships and Faculty Fellowships, and the Education Fellowship Program. Plans include continuing these programs, as well as expanding opportunities for minority students and scholars through internships, fellowships and other academic programs such as intensive introductory courses in Smithsonian fields of research.

The Smithsonian Archives plans improvements to its collections space and services over the next five to ten years. As the Institution grows and diversifies, so do the records of the Archives. With advancing technology, the Institution's various records become increasingly sophisticated and complex. The Archives must modernize and develop to allow future new systems for access, retrieval, and storage of records in order to keep pace with the needs of researchers and other users. The current plan has four components: coordination of archival interests, needs, and requirements across the institution; some increase in number and diversity of personnel to handle an increase in number and diversity of records; investment in modern equipment to handle and preserve audiovisual and machine readable records and archival management information systems; and continued planning for future facilities to house records and allow researchers and others to access and use them.

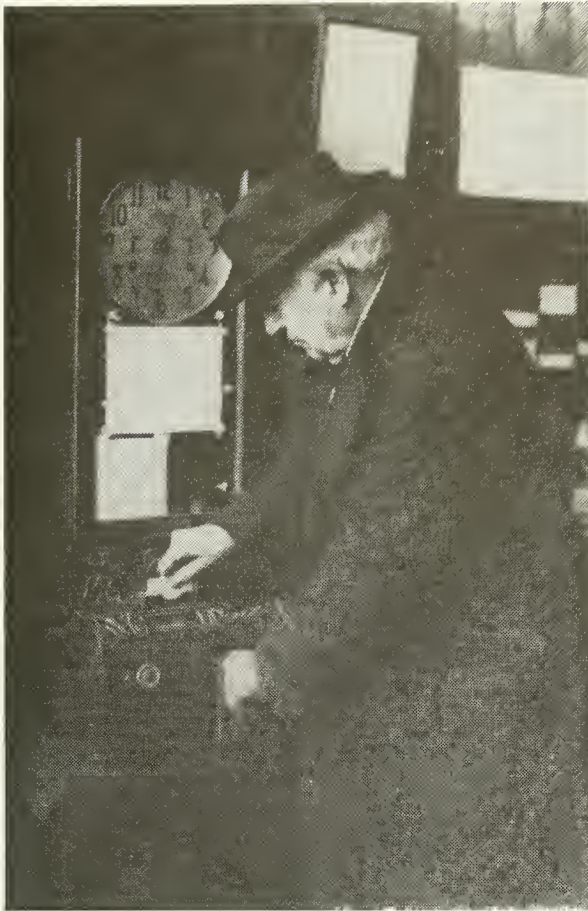
The Smithsonian Libraries, another major institutional research support service, must continue to increase its holdings of books and journals, improve basic systems, and implement a long range plan of book preservation. Systems and treatment are important because many portions of the collection are in danger of deteriorating. Sustained resources for the purchase of books and journals are important because of spiraling costs. As is the case for the central archives, the Institution will need to consider added space for library requirements.

The Institution will continue to seek equipment and moving expenses to support the use of the space at the Museum Support Center (MSC). The successful renovation of various exhibit, office, and public areas in the Museum of Natural History is contingent upon the Institution's ability to secure resources to finish this valuable addition to the physical plant, and this effort remains a high priority over the planning period. The Institution will continue to seek and dedicate funding for the purchase of equipment for storage of large objects, shelves, drawers, and storage cabinets at the MSC. The transfer of collections will occur over a multi-year period, as the decks in the various pods and the appropriate storage equipment become available.

### Summary

Projected resources for research and curation activities total \$167 million in FY 1994, or approximately \$25 million above the FY 1990 levels. Technical and clerical staff, supplies, materials, instrumentation, and equipment account for most of the Federal increase. Additional unrestricted Trust support will be provided through the Regents programs if auxiliary activities continue to perform well.





Even a genius must clock in (top) and may have to rest his eyes for a moment (bottom). Over three hundred photographs, which the ETL Testing Laboratories donated to the Museum of American History in February 1988, document Thomas Edison's public and private life from 1900 through his death in 1931. The photographs, now in the Museum's Archives Center, capture Edison in meetings, at ceremonies, and on picnics with Henry Ford, George Eastman (of Eastman Kodak), and Harvey Firestone and with Presidents Coolidge, Harding, and Hoover.

American History staff, cooperating with the Institute of Electronic and Electrical Engineers, curated a touring exhibit of some of these photos. The exhibit, which ETL sponsored, has traveled to Knoxville, Boston, and New York City and will stop in Utica, New York and Evansville, Indiana before ending in January 1989.

The Archives Center, a repository for books, manuscripts, and photographs which complement American History's collections, serves not only American History but also members of the public who have valid research interests. (Top photo, S.I. negative No. 88-10872; bottom photo, S.I. negative No. 88-10868)







## CHAPTER 5: EXHIBITIONS

Exhibitions are the principal means for the Institution to communicate to public audiences recent discoveries, important ideas, and new results of scholarship in science, history, and art. In addition to the approximately 25 million visitors annually who enjoy the Institution's museums, galleries, and Zoological park, many millions more view Smithsonian traveling exhibitions, which appear throughout the United States and abroad, and the Institution's annual Folklife Festival. Besides the curation and research benefits that the Institution and the national and international scholarly communities derive from the collections of the Smithsonian, the Institution's collections form the basis of its rich and varied exhibition programs.

All of the Institution's museums and a number of other offices conduct exhibition programs. These programs range from small programs, such as those conducted intermittently by the Office of Horticulture, to large temporary exhibitions or permanent reinstallations in the museums. Major support comes from Federal appropriations, but the central special exhibition funds provided annually by the Board of Regents and gifts and donations from private individuals and firms significantly supplement museum and gallery activities.

This chapter describes some of the upcoming exhibition efforts that will occur over the next five years. For the most part, the overall, projected resources cover only the design, production, installation and other operational efforts associated with the various Institutional and bureau exhibit production shops. They do not include the research efforts of the Institution's curatorial staff that involve such tasks as searching for and selecting appropriate objects for display, developing authoritative scripts for publication or interpretation, and supervising and overseeing environmental controls, travel and safe handling of specimens and artifacts. Resource estimates also exclude the various important support and production services provided by the facilities services offices, such as the Office of Plant Services and the Office of Protection Services.

### Areas of Emphasis

As related to exhibition programs, principal areas of emphasis for future years include the successful completion of Columbus Quincentenary projects; the production and interpretation of exhibitions so that they appeal to, enfranchise, and are understood by the broadest possible audience; the accelerated renovation of major exhibition areas; and re-examining and changing the general processes involved in exhibition development to implement a team approach, to streamline systems of approval and to reduce costs of exhibition development and production.

### Projected Resources

Resources dedicated to exhibition production will total \$36 million in FY 1990. As Chart 5-1 shows, about 43% of funding for exhibitions is from Federal appropriations, and 49% support from Trust sources. Government grants and contracts support amounts to about 8%.

Federal support should increase through FY 1992, largely as a result of increased Federal funding for the Columbus Quincentenary exhibitions. After the Quincentenary



In 1916, Mountain Chief, a Blackfoot Indian, listens to a recorded Indian song and interprets it for Frances Densmore, one of several female anthropologists who worked in the American Southwest. During her career, Densmore worked with 76 groups and collected more than 3,350 songs between 1901 and 1940. She submitted her notes and recordings to the Smithsonian's Bureau of American Ethnology, and today the Densmore Collection resides at the Library of Congress.

"Daughters of the Desert: Women Anthropologists in the American Southwest" focuses upon those women anthropologists, such as Densmore, who not only blazed trails for women by insisting that they be allowed to work as anthropologists but who also blazed trails for anthropology by researching Native American peoples and folkways about which previously there had been little knowledge. "Daughters of the Desert" travels, under the aegis of the Smithsonian Traveling Exhibition Service (SITES), from March 1988 (Pennsylvania) through April 1990 (Rhode Island). (photo courtesy of National Anthropological Archives)



observances there will be a continuing need for maintenance and upkeep of related exhibits, and the Institution plans to retain some resources in its base Federal funds to achieve this purpose, along with Federal support for any other necessary follow-on exhibition, education, or public service projects. Operations funded by unrestricted support should increase modestly if revenue inducing activities continue to be successful. The Institution's restricted support is projected to remain stable, a conservative outlook, since gift and grant support should increase as a result of increased fund raising efforts. Projections in Table 5-1 are before application of overhead recovery.

**TABLE 5-1**  
**PROJECTED RESOURCES FOR EXHIBITION PROGRAMS**

(Thousands of Dollars)

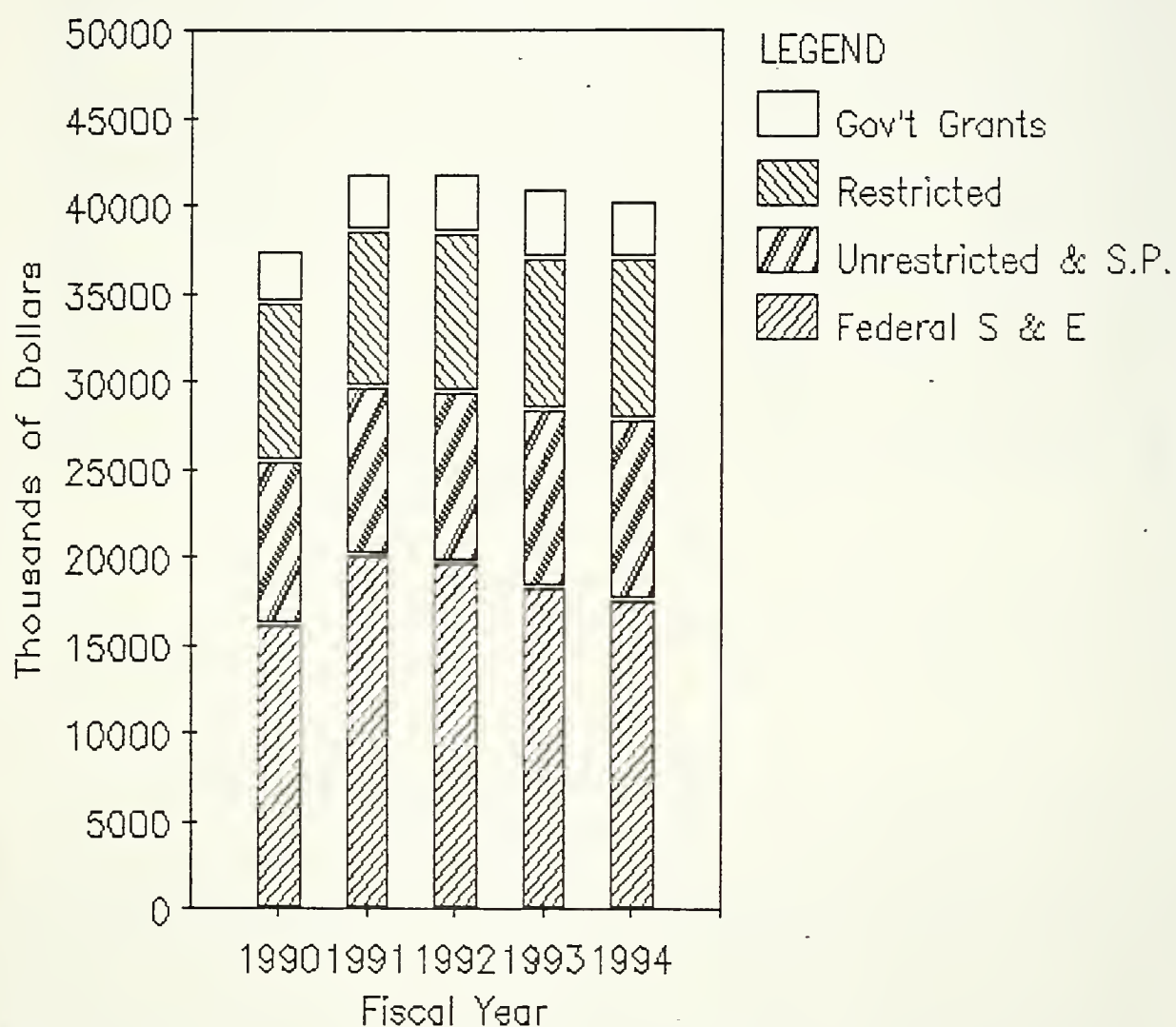
<u>SOURCE OF FUNDS</u>	<u>FY 1990</u>		<u>FY 1991</u>		<u>FY 1992</u>		<u>FY 1993</u>		<u>FY 1994</u>	
	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>
Federal S & E	289	16,222	314	20,239	314	19,766	313	18,323	310	17,668
Unrestricted and Special Purpose	62	9,300	62	9,585	61	9,770	60	10,168	60	10,320
Restricted	1	9,088	1	8,821	1	8,966	1	8,630	1	9,110
Government Grants and Contracts	0	2,958	0	3,237	0	3,338	0	3,943	0	3,300
Total	352	37,568	377	41,882	376	41,840	374	41,064	371	40,398

### Exhibition Highlights

#### Columbus Quincentenary

Among many Institutional exhibitions in preparation for various audiences during the Columbus Quincentenary commemoration, the Museum of Natural History is developing an exhibition titled "Seeds of Change." Scheduled to open at the Smithsonian in October 1991, this exhibition will focus on the exchange of plants, animals, and diseases that occurred after Columbus' voyage of discovery. Transferred to new settings as a result of the contact between the Old and New Worlds, sugar cane, the potato, corn, the horse, and smallpox became powerful catalysts with immense consequences for humankind.

Chart 5-1  
 Projected Resources for  
 Exhibition Programs  
 Fiscal Years 1990 - 1994



The National Museum of American History plans a major permanent exhibition, entitled "American Encounters," which will examine and present the interactions and contributions of diverse peoples in North America from the early colonization period to the present. In conjunction with the exhibition, the Museum will present an ambitious program of public symposia, archaeologically-based temporary exhibits, and related publications.

The National Portrait Gallery will join the Prado Museum in Madrid and the Kimbell Art Museum in Fort Worth, Texas in organizing a major exhibition as part of the 1992 Columbus Quincentenary observance. The exhibition will concentrate on 16th-century Spanish portraiture, exploring the new, indigenous artistic movement in Spain during the reign of King Philip II -- the time when Spanish colonial influence in the Western Hemisphere was at its height. Expectations are that this exhibition will include masterpieces of the period borrowed from the Prado, the Kunsthistorischesmuseum in Vienna, and the British Royal collections and will reflect the very latest research into 16th century painting and cultural developments. Various other Smithsonian museums and galleries such as the Hirshhorn Museum and Sculpture Garden, the Museum of American History, and the Museum of American Art are planning conferences, exhibitions, and other activities for the Quincentenary. The Air and Space Museum is planning an exhibition entitled "Where Next Columbus?" which will examine prospects for discovering other "new worlds" in space during the next 500 years of exploration. Under the oversight of the Smithsonian's International Activities Council, the Office of Quincentenary Planning coordinates the Institution-wide activities, through the recently established International Center.

#### Broad Appeal and Enfranchisement

Among Institutional exhibitions intended to appeal to a broad audience, and among the major shows produced at the Museum of Natural History is "Crossroads of Continents," which opened in September 1988. This exhibition looks at the history, art, and traditional cultures of the North Pacific Rim -- from Siberia to southern British Columbia -- and brings together, for the first time, artifacts obtained by Russians from Russian America that have been preserved in the Soviet Union, and previously unexhibited Siberian collections obtained by American research teams in the early 1900s. The show will travel to New York, Chicago, Seattle, Anchorage, and Ottawa. Subsequently it will tour several cities in the Soviet Union.

Other major exhibitions at the National Museum of American History planned for broad audiences are the computer age, "Connected: The Emerging Information Age"; a recreation based on the original molds and castings of various White House spaces entitled "The Ceremonial Court"; an examination of women's changing roles and their political activity entitled "Parlor to Politics"; a reinstallation of the First Ladies Hall; and "The American Presidency, 1789-1989," which depicts the office of the presidency as it has evolved over the years.

The bicentennial of the United States Constitution is the second of the major celebrations marking the birth of our nation (the bicentennial of the American Revolution in 1976 being the first). The Institution has been marking this historic period (the Continental Congress approved the draft of the Constitution in September 1787, but full ratification did not occur until June 1788) with exhibitions, lectures, film, and symposia which will reacquaint today's generation and diverse audiences with our Constitution's historical context and its development over time. The National Portrait Gallery plans,





Koryaks in northeast Siberia, probably on the Kamchatka Peninsula, have collected seabird eggs from rookeries on the bluff pictured at right. Waldemar Jochelson photographed this scene around 1900 while with the Jessup Expedition mounted by New York's American Museum of Natural History and constituting the first ethnographic study of the whole North Pacific area, looking at both Siberian and Alaskan indigenous peoples. In its wide-ranging ethnographic interest, this expedition was a precursor of "Crossroads of Continents," a touring exhibit of the history, art, and traditional culture of Siberian, Aleut, Eskimo, and Northwest Coast peoples. "Crossroads" opened in September 1988 and contains artifacts and photographs (such as this one) from New York's American Museum of Natural History, from the Leningrad Museum of Anthropology and Ethnography, and from the Smithsonian as well as other North American, European, and Soviet museums and collections (AMNH Neg. 22094).



for spring 1989, the "First Federal Congress," its second exhibition celebrating the Bicentennial of the Constitution. Scheduled to open the year of the 200th anniversary of the first session of Congress, this exhibition will commemorate the men who were a part of that first select group. In the fall of 1989, the Portrait Gallery plans to offer "Portraits of Distinguished American Jurists," an exhibition which will evoke the rich personalities and abilities that came into play in determining the evolution of this country's legal processes and institutions.

In May 1989, the Air and Space Museum will open a new gallery exhibition entitled "Beyond the Limits: Flight Enters the Computer Age." It will feature computer interactive exhibits, encouraging visitors to learn some of the many ways in which computers have revolutionized the design, testing, and flying of modern aircraft.

In 1989, the Anacostia Museum will open "Inspiration: 1961-1989," which will feature art works by members of the District of Columbia Art Association. For 1990 Anacostia has scheduled two major shows: "The Real McCoy," which will tell the story of inventions and innovations by Blacks in America from 1619 to 1930; and an exhibition that will feature selected images of rural southern folkways by the noted Black photographer P. H. Polk. After 1990, planned future exhibitions include "Health Problems of the Black Community" and "Black Washington: Culture and Conflict in Historical Perspective."

The Traveling Exhibition Service (SITES) will continue to provide exhibitions designed for travel to museums, colleges, and other cultural organizations throughout the country and abroad. SITES has evaluated its mission relative to the needs of the national museum community and has determined that new directions must chart its activities in the coming five years. Over this time, SITES will devote increasing resources to exhibitions that treat themes relevant to minority audiences and will work closely with other Smithsonian Museums and with the Institution's International Center.

The Office of Folklife Programs will continue to develop and produce annually the very popular Festival of American Folklife which takes place at the end of June and over the July 4th holiday weekend. The Office will continue to work with and organize folklife exhibitions in concert with other Smithsonian bureaus; publish scholarly works and program related films; extend activities with regard to the newly acquired Folkways Record Archives through publications and recordings; and expand relationships with national and international folklife institutions and organizations.

### Exhibition Reinstallation

Exhibition management entails not only mounting new shows but also refurbishing existing ones. The Museum of American History's major exhibit reinstallation program, one example of an Institution-wide emphasis on reinstallation, continues with its third exhibit entitled "A Material World" which opened in the spring of 1988. This exhibit explores the vast range of natural and synthetic materials and the social and economic consequences of their distribution and manufacture. As part of the Institution's on-going renovation of exhibits, the Museum of Natural History has recognized that advances in the biological, physical, and anthropological sciences are exceeding the rate at which the Museum has renovated permanent exhibits, causing many displays to be badly out of date. Therefore, the Museum plans to embark on an accelerated renovation program to maintain the integrity of its permanent exhibit halls.



Tropical rainforests provide the world with raw materials, regulate global climates, and contribute to biodiversity. Although these are the facts many continue to imagine the rainforest as an exotic locale -- a paradise, a hell, or a wasteland, and because they believe these images, they are unperturbed by the ongoing wholesale destruction of the rainforest, such as the instance which appears above.

Mounted by the Smithsonian Institution Traveling Exhibition Service in collaboration with the World Wildlife Fund, "Tropical Rainforests: A Disappearing Treasure" dispels misinformation and emphasizes the importance of the rainforest. "Tropical Rainforests" is on view from May 18, 1988 until January 1989 in the S. Dillon Ripley Center's International Gallery and then tours the United States and Canada through 1994. (photo by Richard Hofmeister)

### Reexamining, Streamlining, and Economizing

Since exhibitions are the most visible means of communicating the Institution's interests and knowledge to the visiting museum public, the Institution will undertake a comprehensive examination of the costs associated with the current exhibiting enterprise, to determine whether it is money well-spent and whether there are ways of stretching exhibition budgets further. The Institution has identified the need to consider how to make the total exhibition process more effective in various museums and in serving various audiences.

With regard to SITES, its reevaluation has already determined that fewer efforts will go toward large, complex, and costly exhibitions, and more support will be directed to producing smaller, less expensive exhibitions. SITES will continue to charge participation fees, but will also request modest increases in Federal appropriations as well as trust funds.

Annually, the Office of Exhibits Central (OEC) serves approximately 40 Smithsonian units and participates in approximately 220 projects. The Office is a major source of production support for the Traveling Exhibition Service for its national and international exhibition programs. To maintain productive capacity in the coming years, the Office of Exhibits Central needs to add some exhibit professionals to its staff which will help to meet institution-wide demand for design and editing services, model making, graphics production, and exhibit fabrication. Now that the Quadrangle facility has opened, OEC will be instrumental in developing full use of its exhibit facilities. To increase management and scheduling efficiency in the general exhibition process, in FY 1990, OEC will begin managing exhibition spaces not attached to a bureau, such as the International Gallery in the Quadrangle, along with a new demonstration gallery in the Arts and Industries Building.

### Summary

Funds for the Quincentenary exhibitions will decline in the latter part of the planning period, but resources will continue for maintenance of the exhibitions and other supplementary projects, as yet undetermined. Federal resources are projected to increase for the expanding Anacostia program, the Office of Exhibits Central, and the Traveling Exhibitions Program. Unrestricted Trust Funds, an important source of exhibition support, may increase moderately, depending on the continued good performance of the revenue producing activities. Future year restricted Trust support levels depend on the success of fund raising efforts, and are difficult to speculate about.



A popular misconception is that Native American artists have abandoned their traditional crafts, materials, styles, and subjects, but the Renwick's "Lost and Found Traditions: Native American Art 1965-1985" overwhelmingly demonstrates that Indian artists are using and reinterpreting traditional resources.

Kwaglutl carver Richard Hunt's frontlet depicts a raven seeming to emerge from the sun after having attempted to bring light to mankind. Frontlets are worn on the forehead at high ceremonial occasions to denote the wearer's high status, and Kwaglutl frontlets traditionally employ projecting forms, such as the beak in Hunt's work. The painted clay pot by Gladys Paquin, whose mother was Laguna and whose father was Zuni, consists of Laguna clay and incorporates Laguna and Zuni designs.

This exhibit received grants from the Primmerica Foundation, the Sacred Circles Fund, the National Endowment for the Arts, and the Smithsonian Educational Outreach Fund.

Under the auspices of its organizer, the American Federation of Arts, it will travel, through October 1989, to Albuquerque, Los Angeles, Rochester, and Columbus, Georgia. (photos by Bobby Hansson)





## CHAPTER 6: EDUCATION AND RELATED ACTIVITIES

The Smithsonian conducts a wide range of educational programs directed to general visiting audiences and specialized constituencies. These programs include:

- the activities and classes of the Resident and National Associate Programs,
- television, radio and other media efforts,
- training, symposia, conferences and information services
- services provided to the visiting public by the Visitors Information and Associate Reception Center.

This chapter also includes the use of Trust resources associated with the centrally approved Regent's public service and outreach program. The *Smithsonian Magazine* and the Smithsonian Press' popular brochures, recordings, and publications function as major educational services to the public and are included. They present a diverse range of services, make the Smithsonian more accessible, and enhance the quality of educational experiences available to the national and international visitors and various audiences.

While too numerous to individually mention, all of the major museums sponsor many and varied educational and public information activities appropriate to their operational environments. These form an important part of the overall learning opportunities available to institutional audiences.

### Areas of Emphasis

While the Institution will continue to produce quality educational activities, and provide valuable informational services, as well as other products, the Institution will highlight other areas of educational emphasis in future years. These include the successful completion of the public conferences and other events commemorating the Quincentenary; the development of culturally diverse audiences; and expanded opportunities for minorities to participate in educational activities of the Institution. Extensive discussion of the Institution's Columbus Quincentenary observance occurs in the Exhibitions Chapter; therefore this chapter will only mention the Quincentenary in passing.

### Projected Resources

Education and related activities, including expenses associated with auxiliary and bureau activities, should account for approximately \$192 million of the Institution's dollar resources in FY 1990. Federal appropriations, about \$9 million in FY 1990, are a significant source of support for education and related activities in the Museums of American History, Natural History, American Art, Air and Space, and the Zoological Park, where staff and operations concentrate upon developing and enriching public educational and informational programs, such as the naturalist and education centers in the Museum of Natural History, the Education Resource Center for Teachers in the Air and Space Museum, and the interpretive and public information services of the Museum of American History and the Zoo.

Table 6-1 contains a breakdown of projected FY 1990-94 expenses, before overhead recovery, associated with education and related activities.



A perennial favorite of children and adults is the pop-up or movable book because it can both educate and entertain. In this century, comic book and popular movie characters have benefited from pop-up techniques, but art books have integrated these methods also. Pop-up and movable technology continues to be a staple of educational publications, for instance about anatomy, childbirth, or engineering. Indeed, one of the first mechanical books was the *Opera Mathematica*, a 1551 book on astronomy by Johannis Schonerer, printed in Nuremberg and using pointers and revolving disks, called volvelles, which easily demonstrated the movement of the universe.

The Cooper-Hewitt received a 400-item collection of pop-up books from New York collector Daniel Mason and displayed books from the Mason donation, as well as books on loan from other private individuals, in the "Surprise! Surprise! Pop-Up and Movable Books" Exhibition on view at the Cooper-Hewitt from November 1987 through February 1988.

TABLE 6-1

## PROJECTED RESOURCES FOR EDUCATION AND RELATED ACTIVITIES

(Thousands of Dollars)

SOURCE OF FUNDS	FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FTE	\$	FTE	\$	FTE	\$	FTE	\$	FTE	\$
Federal S & E	197	8,906	224	10,540	228	10,694	226	10,380	226	10,405
Unrestricted and Special Purpose	680	182,599	709	192,692	732	201,890	750	212,494	762	223,589
Restricted	0	203	0	189	0	181	0	176	0	171
Government Grants and Contracts	0	0	0	0	0	0	0	0	0	0
Total	877	191,708	933	203,421	960	212,765	976	223,050	988	234,165

## Education and Related Activities -- Highlights

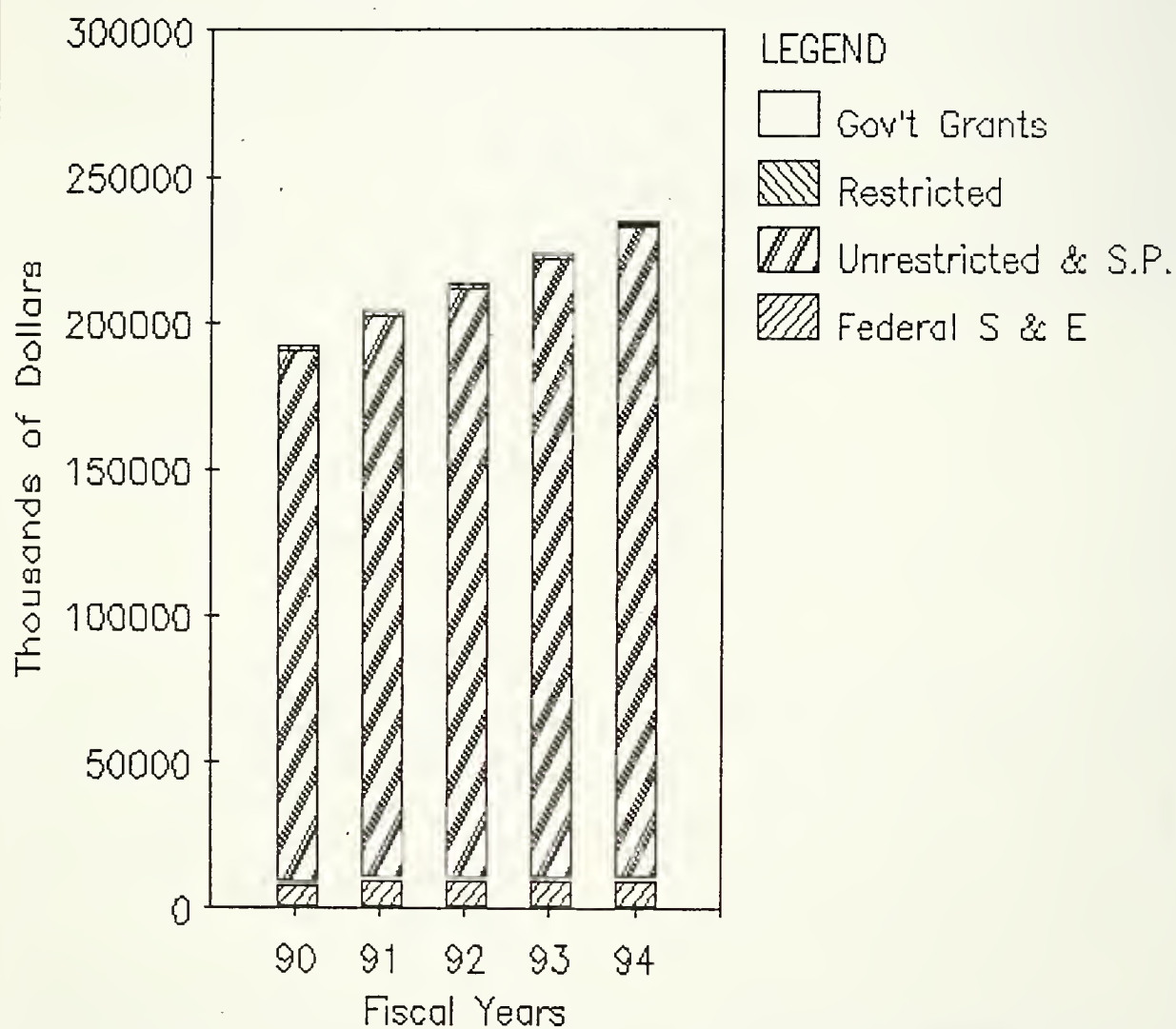
Cultural Education Committee and Associates' Programs

As a continuation of the Institution's outreach efforts begun in 1983 with the establishment of the Committee for a Wider Audience, the Institution has convened a new Cultural Education Committee to help the Smithsonian address more effectively museum issues associated with serving the growing, culturally and ethnically diverse interests of the United States. This new committee consists of distinguished Washingtonians from major U.S. cultural groups (Afro-, Asian-, Hispanic-, American Indian and other Americans). The Cultural Education Committee assists senior management 1) in broadening outreach through more varied cultural programming and representation in exhibits, 2) in developing resources, and 3) in diversifying Associate and Contributing membership to undergird these efforts.

Expressly intended to broaden the Institution's audience, the Institution's Associates' planned programs in future years will continue to be major instruments for delivering the Smithsonian's educational products to the public. Founded in 1965 on the 200th birthday of James Smithson, the original Associate Program especially targeted residents of the Washington metropolitan area, drawing on the varied resources of the Institution to



Chart 6-1  
Projected Resources for  
Education and Related Activities  
Fiscal Years 1990 - 1994



provide educational and cultural opportunities to individuals or families who chose to join. The Institution's larger, public education aim, however, has always been to make Smithsonian resources increasingly accessible to people of all ages and without regard to their geographic distance from the National Mall. With the inclusion in April 1970 of *The Smithsonian* magazine as a major benefit of associate membership, the original Smithsonian Associate Program has evolved now to include separate National and Resident organizations which offer educational and learning experiences geared to public constituencies in the Washington area, as well as across the country.

The objectives of the Smithsonian National Associate Program (SNAP) will remain as they have been since 1970: to provide to Associates and the general public high quality, educational experiences in subjects relating to the Smithsonian and to encourage support for the Institution's work. The enthusiastic participation of its national constituency has enabled the Program to meet and advance its outreach goals.

Through its Lecture and Seminar Program, the National Associate Program will continue to bring highly popular, scientifically and culturally sound activities to cities and towns throughout the United States. In co-sponsorship with local scientific and cultural organizations, the National Associate Program will visit 20 cities in FY 1989, providing learning opportunities for Associates and positive public relations for the Institution. Building upon past successes, the Program, in the future, will expand its series of residential seminar programs, which draw Associates from around the country to attractive locales for week-long, in-depth educational programs. The Lecture and Seminar Program also will develop a series of international programs, in countries yet to be determined, and will continue to develop offerings which appeal to and attract minority audiences. A new Associates Research Expedition Program will provide members with the opportunity to participate side-by-side with Smithsonian research staff.

The Associates Travel Program looks toward a future of offering outstanding educational travel opportunities to Associates. SNAP will work closely with *Air and Space* magazine staff to provide study tours which meet the needs of its members. The Washington "Anytime" Weekend program should remain a popular and inexpensive way for out-of-town Associates to sample the delights of the Institution.

Annually the Resident Associate Program's (RAP) approximate 2,000 activities attract more than 200,000 persons. During the planning period, RAP will continue its mission of providing educational, cultural, and outreach programs for its members and the general public residing in the metropolitan Washington area.

The liberal studies curriculum of RAP's campus on the Mall offers a broad range of courses, seminars, and lectures, including certificate programs and courses bearing credit given by area universities. RAP organizes and conducts study tours ranging in length from two hours to three days; performances and concerts; first run and classic films; studio arts workshops; events for young people and their families; and Discovery Theatre, which introduces children to live theatre. Over the planning period, RAP will develop a wide variety of educational programs as part of the celebrations of the Bicentennial of the French Revolution (1989), the Festival of Indonesia (1991), and the Columbus Quincentenary Commemorations (1992).

RAP will continue initiatives to involve new audiences from Washington's minority communities. RAP's 16 year-old scholarship program for inner-city youth and adults will continue, as will the Discover Graphics Program and the Discovery Theatre. During the planning period RAP will celebrate its 25th anniversary (fall of 1990) for which planning has begun.

#### Innovative Use of Media

The Smithsonian is broadening its audience in other dimensions by utilizing new media and by using existing media in novel ways. The central public information unit at the Institution, the Office of Public Affairs, is expanding its efforts to increase minority visits to the Institution and minority participation in Smithsonian activities by enhancing awareness of the Smithsonian in a variety of ethnic media. The Office produces a Spanish-language version of the *Smithsonian News Service*, a feature-story service distributed to an increasing number (approximately 2,500 at last count) of newspapers nationwide, and other Spanish-language materials. Public Affairs will intensify its efforts to increase awareness among wider audiences of available Smithsonian research, performances, and cultural events. The Office also plans to coordinate the pan-institutional public information activities concerning the Columbus Quincentenary commemorations.

The Office of Interdisciplinary Studies contributes to the Institution's efforts to increase and diffuse knowledge by generating books and other educational materials based on seminars and symposia. Its aim is to strengthen integrative learning, drawing upon the sciences and humanities to address problems and trends in modern civilization. A major symposium, "Afro-Americans and the Evolution of a Living Constitution," held in March, 1988, is being edited by the historian, John Hope Franklin, for the Smithsonian Press. The symposium featured a special workshop for educators, and a national teleconference. The science and technology implication of the French Revolution and Declaration of the Rights of Man will be treated in an October, 1989 symposium to be co-sponsored with the National Academy of Sciences in cooperation with the University of Virginia. Another major symposium, "Exploring the Unknown," will help commemorate the Columbus Quincentenary in 1992. Also envisaged is a seminar series, "Research on Contemporary Cultures and Civilizations," and commemorative seminars on Martin Luther King. These and other programs enhance the Institution's efforts to attract a wider audience while contributing to the Institution's education mission.

To fill the demands of wider and more culturally diverse audiences for its educational and related public service programs in its exhibitions programs, the Institution plans more communicative displays for its national and international visiting populace. In education and related public service activities, the Institution plans to use media more effectively, to augment professional and public education, and to increase training opportunities in the coming years.

Through its education, training, and other public service activities, in the form of courses, conferences, publications, recordings, television, and films, the Smithsonian reaches an audience estimated to exceed 85 million annually. For many years the Smithsonian has demonstrated the importance of using evolving technologies for furtherance of public education. One recent effort to that end has been, in association with a consortium of public broadcasting stations, the establishment of a National





As one of several events observing Dr. Martin Luther King, Jr.'s birthday, The Smithsonian Cultural Education Committee sponsored a performance by Los Pleneros de la 21. Founded in 1983 in New York by Juan Gutierrez, this group of Puerto Rican craftspeople, musicians, and dancers specializes in bomba and plena music styles. This Martin Luther King, Jr. birthday program was part of the Committee's effort to increase minority participation in Smithsonian cultural events and to act upon the Committee's mandate, which Secretary Adams expressed when he inaugurated the Committee, that "the Smithsonian is not just a chronicler of the dead past, but a participant in an ongoing process of communication." (photo by Hugh Talman)

Demonstration Laboratory for Interactive educational technologies. In addition, to serving as a nationally recognized center for the demonstration of Interactive video technologies, the Laboratory will establish clearing house database, and sponsor workshops to promote understanding and utilization of the technologies for educational purposes.

The Smithsonian will continue to develop more effective uses of media, a key component in meeting its responsibilities for diffusion of knowledge. Toward this end personnel from throughout the Institution have formed the Smithsonian Film, Television, and Radio Communications Council. In the coming years, the Council will help forge a comprehensive media initiative, aimed at transforming the process of reaching classrooms and homes here and abroad. The Smithsonian also has focused recently on the Hispanic Media Working Group to consider future development in this area.

Elements of the new media initiative are already taking shape, and the Council has planned further development, production, and dissemination for the next five years. The University of the Air, likely to be renamed Smithsonian Project Discovery, will constitute a new educational system, combining the power of drama, the power of interactive video technologies, and not least, the power of storytelling to teach high school and college students the intellectual and cultural history of the 20th Century. Expectations are that cable as well as public television will broadcast Project Discovery.

Plans also call for *Smithsonian World*, the Institution's cultural documentary series produced with WETA-TV, to continue and to possibly expand into an international series, involving major museums and cultural institutions around the world. *Smithsonian Quest* is a pilot project intended to stimulate independent thinking and discovery among 9 - 12 year-olds. The Office of Telecommunications and the Office of Elementary and Secondary Education, in collaboration with the Bank Street College of Education, are developing this project on the theme of "1492," using television and interactive video to explore peoples, cultures, and scientific achievements throughout the world in the period of Columbus' historic voyage. The Smithsonian will also re-emphasize its commitment to radio with an expansion of *Radio Smithsonian*, presenting a broader sampling of performance and cultural programs.

The Smithsonian Institution Press, with four divisions, is the publishing arm of the Institution. The Press plans to expand its use of both traditional and innovative media to expand the Institution's audience. Long-range plans call for the gradual expansion of the University Press division, which will add emphasis to scholarly publications in anthropology, art and art history, American studies, aviation and space, natural history, and museum management. The Records Division will continue to produce one or two popular record packages a year and will start releasing two or three scholarly records a year. Some of these records will reflect the collaboration of this division and the Office of Folklife Programs, once Folklife has documented the recently acquired Folkways Records archives. The Direct Mail Book Division intends to publish well-written, carefully researched books of general interest to Smithsonian Associates. The recently established Optical Publishing Division will give careful attention to electronic publishing (data base storage, retrieval, and desk top publishing) over the planning period. The Press will attempt to increase the diversity of its reading and listening audiences by developing and producing more products aimed at broader audiences.



The Smithsonian magazine will continue to attract wide audiences by publishing high quality articles concerning the scientific and cultural contributions of many groups of people and individuals throughout history and from around the globe. The magazine expects to continue to operate successfully and contribute to the general support of the institution's varied programs. It is primarily from magazine surplus funds, along with funds other major revenue-producing activities have produced (as described in the Major Sources of Funding chapter), that the Board of Regents has been able to budget for the approved Regent's programs for acquisitions, scholarly studies, educational outreach projects, and major exhibitions; to fund certain expenses previously met with federal appropriations; and to enhance the Institution's endowment.

Representing a new publication targeted to broaden one of the Institution's constituencies, the *Air and Space* magazine explores the realm of human endeavor in flight and in exploration, science, and research within the atmosphere and beyond. The first issue of the bimonthly *Air and Space* appeared in March 1986. The magazine recounts the history of flight and the latest discoveries in the aerospace world. *Air and Space's* editors expect its educational form and content, consisting of articles blending science, history, and technology, to continue to appeal to general audiences as well as aerospace enthusiasts and professionals.

### Symposia and Training

Numerous offices of the Institution mount seminars and provide training which extends the Smithsonian's resources to new audiences. The Office of Elementary and Secondary Education will work to strengthen the Institution's role in providing workshops, publications, and various services to the national pre-college audience. In the future, the Office will increase its teacher training, expand production of supplementary curriculum materials, and strengthen Smithsonian relationships with museums and schools around the world, but especially in Hispanic American communities and in Latin America. The Office plans a book series for children, along with expanded services for disabled people.

The National Science Resources Center (NSRC) has placed a high priority on the development of programs to improve the teaching of science in the nation's elementary schools. Several projects are underway in this area. The NSRC is developing a resource collection and information data base of elementary science teaching resources for use by school systems across the country. Science and Technology for Children, a four-year project recently funded by the John D. and Catherine T. MacArthur Foundation, will develop science materials that make hands-on science manageable for elementary school teachers. The Center is also establishing a network of teachers, scientists, science educators, and school administrators who are working to improve the teaching of science in the nation's elementary schools.

Museum training is becoming more sophisticated, and the Institution's training activities constantly incorporate new approaches to ensure that recipients of Smithsonian training, whether from the U.S. or abroad, receive the highest quality training. The Institution plans to use new training techniques, to expand training for developing countries, and to incorporate audiovisual materials as teaching tools. As one example of the Institution's priority interests in training, the Office of Museum Programs (OMP), the Museum of American History, and the Museum of Natural History have been working together to strengthen Native American programs at the Smithsonian. The two museums began a new complementary Native American Program in 1986, and in 1989 the Museum





From left to right, U.S. Civil Rights Commissioner Mary Frances Berry, NAACP Legal Defense Fund Director-Counsel Julius Chambers, moderator and local television anchor Renee Poussant, and historian John Hope Franklin participate in a teleconference which concluded "Afro-Americans and the Evolution of a Living Constitution," a March 1988 symposium under the overall cosponsorship of the Smithsonian's Office of Interdisciplinary Studies and the Joint Center for Political Studies.

In this two-day conference, which was open to the public, historians and legal scholars explored the dialectical process by which the Constitution has grown more inclusive and by which Afro-Americans, as well as other minorities, have gained enfranchisement.

The symposium received support from numerous sources, principal among them were the Ford Foundation, the Philip Morris Companies, the Rockefeller Foundation, and Smithsonian Trust Funds.

of American History plans to increase its internship opportunities for Native Americans, complete two books on American Indian History, produce a traveling exhibit relevant to Native Americans, expand its performance and film series on American Indian culture, and increase the role it plays in supporting American Indian educators. The Museum of Natural History plans the publication of various tribal catalogues in future years and will mount traveling exhibitions based on various Smithsonian collections. The Museum of Natural History also will facilitate access to and involvement with Smithsonian collections by American Indian tribes and individuals as part of a larger effort by the Museum's Department of Anthropology to document the collections. The Air and Space Museum will continue to conduct teacher workshops, some of which are accredited, on a variety of science, aerospace, and technology topics.

The number of qualified American Indians available to serve the more than 100 tribal museums and cultural centers remains discouragingly small. Although these museums hold remarkable and important collections of historical and ethnological materials, they lack resources to provide the required training themselves or to obtain much needed technical assistance for their museum operations. Through OMP's Native American Program, as well as audiovisual programs addressing preventive maintenance and care of museum collections, the Institution has continued its outreach to the American Indian community. The On-site Workshop Program and the Internship and Visiting Professionals Program are responding to the increasing requests for training from museums by adding to the quality and quantity of programs offered.

The Conservation Analytical Laboratory (CAL) training program continues, including a seminar series for advanced specialists, refresher courses for practicing conservators, practical internships for conservation students, and internships for journeyman conservators. The new entry-level training program for furniture conservators has proven very successful, and next year CAL will select candidates for the second class. Based on experience gained through these activities and on careful evaluation of the needs of the profession, CAL managers will identify future directions for CAL programs and restructure them accordingly. CAL will consult closely with other training programs to ensure that the Institution maintains an appropriate role in national conservation training endeavors.

#### Visitors Information Center and Similar Services

Numerous Smithsonian sites have ongoing facilities and programs to provide visitors with information about the collections, exhibits, and activities at that location. Work continues on the Smithsonian Information Center in the Castle Building. This Center's projected completion date is Spring 1989, and the Castle Fund Raising Campaign, which the National Associate Program conducted, secured the project's \$2.7 million funding through such private sources as leadership gifts from the Pew Memorial Trust, the Kresge Foundation, and the Morris and Gwendolyn Cafritz Foundation and generous contributions from the Smithsonian's Contributing Membership Program, National Associates Board, and James Smithsonian Society. This new Center will help the Visitor Information and Associates Reception staff to accommodate growing demand for services to the general public and also to respond to an expected increase in telephone and written inquiries.

Education activities which the research bureaus sponsor are quite varied and in future years will continue to form an important element of the Institution's overall offerings. For example, SAO conducts regular programs of public information and education, including popular lectures and guided bus tours of the Whipple Observatory in



Arizona. Completion of the new base camp at the foot of the mountain during the planning period will allow an opportunity to improve visitor services. The Smithsonian Tropical Research Institute manifests its commitment to the conservation of tropical ecosystems through public information and training programs in Panama. The Smithsonian Environmental Research Center's educational activities include teacher-led field trips, self-guided nature trails, and group tours around the Chesapeake Bay's Rhode River watershed. The Center sponsors a work/learn program which enables students to assist in important research projects. The Zoological Park publishes a newsletter for area teachers informing them of educational activities and offers classes to adults in conservation, animal behavior, and animal medicine.

The Air and Space Museum, through its Education Resource Center, is providing curriculum materials, lesson plans, computer software, and audio-visual materials to educators. The NASM Center distributes a newsletter to teachers across the country and conducts workshops for teachers. The Museum of Natural History maintains the popular Discovery Room for children and Naturalist Center for natural history enthusiasts, in addition to sponsoring workshops, lectures, and other events on various subjects. The Museum of American History develops performance programs, popular publications, conferences, and recently established a new series of free public programs titled *American Sampler*.

The art museums will be equally busy and productive in public information and education. Most conduct seminars, publish free brochures, sponsor lectures, films, and courses for students at all levels. The Sackler Gallery has established an extensive education program for children, adults, teachers, and Asian and other minority communities, and the program is functioning well. The Sackler will continue to develop seminar and symposium programs for secondary, undergraduate, and graduate students. The Hirshhorn Museum and Sculpture Garden plans to intensify public programs to familiarize students and visitors with trends and ideas represented in new works of art. The Museum of African Art will promote increased public awareness and understanding of African cultures through its program offerings including Gallery talks, films, lectures, tours, and workshops. Many other events are in the planning stage and should add to art museums' education and public services during the planning period. The Freer Gallery's forthcoming construction and renovation will reduce its offerings temporarily, but when the gallery reopens in spring 1991, it will resume its full complement of educational and other public service activities.

### Summary

Education and related activities should continue to increase, especially because of the need to provide more extensive information services, public and membership offerings, and other services, to meet the demands of increasingly diverse cultural audiences from home and abroad. Trust support should be forthcoming to fund the necessary expansion, provided the revenue-producing activities continue to perform well. We expect that Federal support will increase moderately for some bureau and office operations, such as the Museums of Natural History and American History, and the Sackler Gallery of Art.



## **CHAPTER 7: ADMINISTRATIVE, FINANCIAL, AND OTHER SUPPORT SERVICES**

The Institution's administrative, financial, and other support services, as described in this chapter, comprise four functional areas:

- Central management
- Central specialized technical and support services
- The bureaus' and offices' administration and management
- Facilities services and maintenance

The central management offices, under the direction of the Secretary and under oversight of the Board of Regents, provide operational planning and policy determination for program and support activities and parameters for utilizing the resources of the Institution. The Offices of the Secretary, Under Secretary, Assistant Secretaries, Treasurer, General Counsel, and Congressional Relations discharge central management functions.

Central specialized administrative and technical offices furnish administrative, personnel, budget, financial, and other professional and technical services required to support operation of the Smithsonian's programs. The offices conducting these functions include the Offices of Accounting and Financial Services, Planning and Budget, Procurement and Property Management, Financial Management and Planning, Audits and Investigations, Equal Opportunity, Risk Management, Information Resource Management, Management Analysis, Personnel Administration, Printing and Photographic Services, Sponsored Projects and Travel Services.

This chapter also includes the management of the Institution's bureaus and offices, because their respective directors are responsible for implementing the Institution's operational plans and establishing bureau level policy. These directors also contribute significantly to the management of the Institution by participating with the staff of central management offices, in advocating and seeking funds for existing and new programs. To highlight the scope of the management functions performed by these directors, this chapter discusses and includes resources associated with the administration of large bureaus and offices.

The Offices of Design and Construction, Plant Services, Protection Services, Environmental Management and Safety, Architectural History and Historic Preservation, and Horticulture discharge the facilities services and maintenance functions. These services primarily focus upon the physical plant and its contents; safety and health programs for staff, visitors, and collections; planning, design, and construction of new and renovated facilities; and architectural and historical research support for the Institution's buildings, along with collections management for the Castle Building and its antique furnishings.



NASM photography lab supervisor Dale Hrabak (center) signs with two of NASM's hearing-impaired photographers, Suzanne Bono (left) and Mark Avino (right). Hrabak has employed hearing-impaired individuals since he became responsible for the lab in 1983, and their employment has required only minor alteration of the facilities and minimal adjustment on Hrabak's part. In order to alert hearing-impaired employees in case of fire, Hrabak had flashing red lights installed in the darkroom and camera workroom and an extremely loud horn installed in the main workroom.

The Smithsonian has liberally cooperated with Hrabak. The Institution supplied TTY lines for the hearing-impaired employees in the NASM photo facility and supported Hrabak's enrollment in signing classes. The Smithsonian provides signers for meetings and seminars the hearing-impaired employees attend, and NASM's intern coordinator works with Gallaudet in placing hearing-impaired interns with the photo lab. In 1988 Hrabak was one of 15 Washington-area supervisors Gallaudet placed in its Supervisor Hall of Fame based upon nominations by Gallaudet interns. Hrabak maintains that this award recognizes not only him but also the Institution. (photo by Geoff Chester)

## Areas of Emphasis

The Goals of the Institution include "maintaining management, administrative, and support services to meet program needs." Two categories of the Areas of Emphasis relate to this goal: management priorities and administration.

The Areas of Emphasis which are management priorities during the planning period include: maintenance and encouragement of Institution-wide communication to foster operating and program improvements; continuation of efforts to improve staff quality, with particular emphasis on equal employment and affirmative action initiatives; critical evaluation of all programs with an emphasis on redirecting resources to the most important efforts; and elevation of management's use of information on spending and resource distribution patterns to facilitate analysis of relative resource needs.

The Areas of Emphasis for Administration during the planning period include: the elimination of operating and funding deficiencies in protection and plant services, safety, and environmental programs, and improving and refining accounting, personnel, and procurement activities.

## Projected Resources

As Table 7-1 shows, based on FY 1990 budgeted amounts, central management functions constitute about \$150 million of total expenses of the Institution before overhead recovery. Central management functions are 3%; specialized and technical services amount to approximately 23%; bureau and office administration are 27%; and Institution-wide facilities operations constitute approximately 47%. While Federal appropriations provide the majority of support for specialized and technical administrative offices, bureau administration, and facilities management, Trust resources contribute significantly to the central management operations. The projections for Specialized Administrative, and Technical Offices include the estimated cost of supplemental pay increases, health insurance requirements, inflation, necessary pay and federal employees retirement system increases.



TABLE 7-1

**PROJECTED RESOURCES FOR ADMINISTRATIVE,  
FINANCIAL AND OTHER SUPPORT SERVICES**

(Thousands of Dollars)

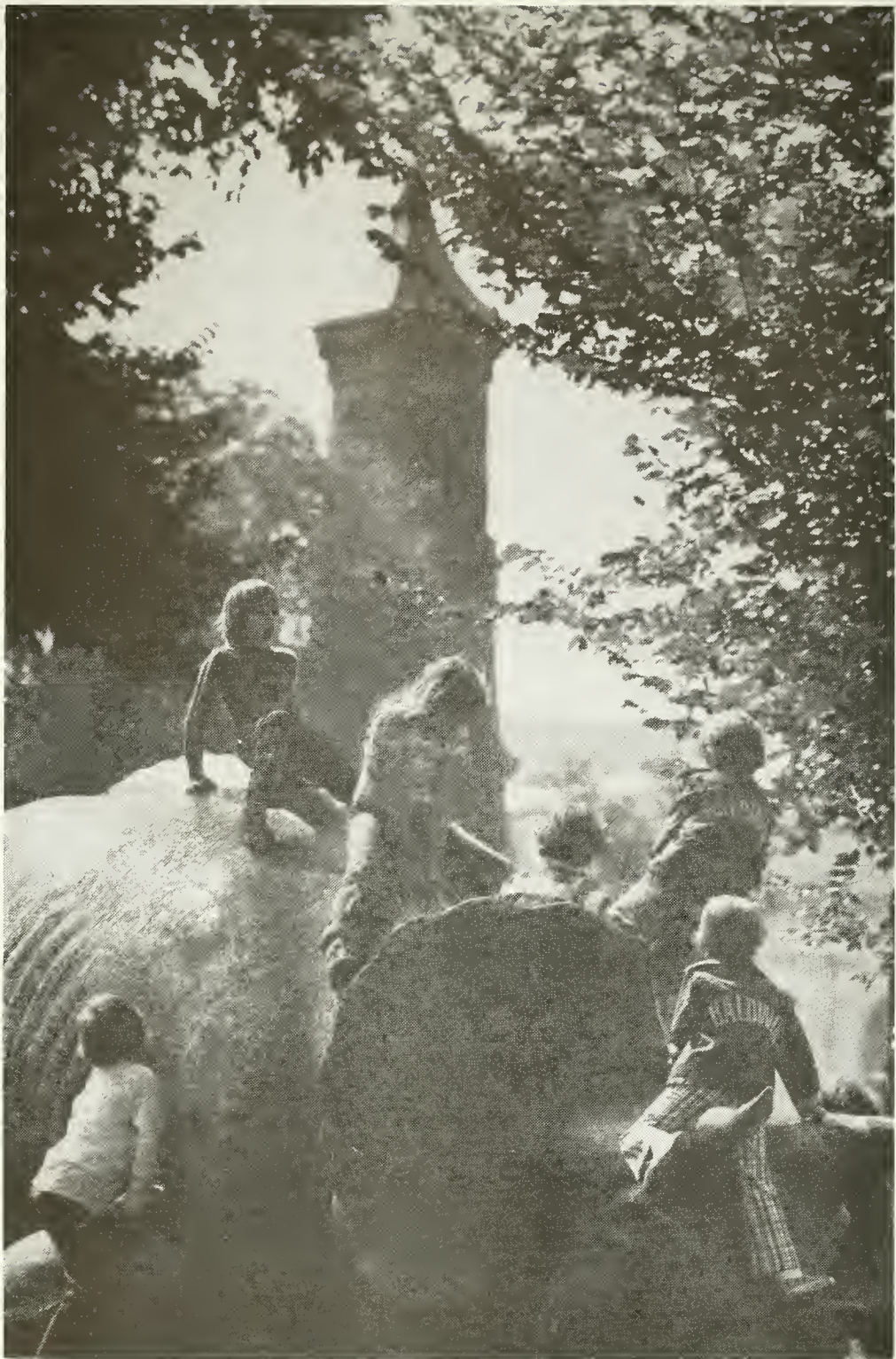
<u>SOURCE OF FUNDS</u>	<u>FY 1990</u>		<u>FY 1991</u>		<u>FY 1992</u>		<u>FY 1993</u>		<u>FY 1994</u>	
	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>	<u>FTE</u>	<u>\$</u>
Central Management:										
Federal S & E	37	2,107	40	2,304	40	2,304	40	2,304	40	2,304
Unrestricted and Special Purpose	26	2,564	27	2,574	27	2,578	27	2,581	27	2,569
Restricted	0	126	0	127	0	107	0	107	0	107
Government Grants and Contracts	0	0	0	0	0	0	0	0	0	0
Sub-Total	63	4,797	67	5,005	67	4,989	67	4,992	67	4,980
Specialized Administrative and Technical Offices:										
Federal S & E	319	19,080	353	37,754	357	48,271	363	57,161	366	68,885
Unrestricted and Special Purpose	205	14,746	213	14,832	213	14,946	213	14,826	213	14,895
Restricted	0	0	0	0	0	0	0	0	0	0
Government Grants and Contracts	0	0	0	0	0	0	0	0	0	0
Sub-Total	524	33,826	566	52,586	570	63,217	576	71,987	579	83,780

**Bureau and Office Administration:**

Federal S & E	660	26,578	656	26,480	658	26,623	659	26,347	662	26,536
Unrestricted and Special Purpose	137	10,290	143	10,643	146	12,365	149	15,220	148	12,383
Restricted	24	3,936	24	4,454	26	4,536	26	4,725	25	4,376
Government Grants and Contracts	0	22	0	0	0	0	0	0	0	0
	—	—	—	—	—	—	—	—	—	—
Sub-Total	821	40,826	823	41,577	830	43,524	834	46,292	835	43,295

**Facilities Services:**

Federal S & E	1,308	68,396	1,369	72,759	1,391	74,715	1,421	77,112	1,441	79,247
Unrestricted and Special Purpose	16	1,810	16	1,865	16	1,624	16	1,627	15	2,074
Restricted	0	0	0	0	0	0	0	0	0	0
Government Grants and Contracts	0	0	0	0	0	0	0	0	0	0
	—	—	—	—	—	—	—	—	—	—
Sub-Total	1,324	70,206	1,385	74,624	1,407	76,339	1,437	78,739	1,456	81,321
TOTAL	149,655		173,792		188,069		202,010		213,376	
Less OH Recovery	-12,120		-12,750		-12,950		-13,000		-13,250	
Net Admin Total	137,535		161,042		175,219		189,010		200,126	



Sometimes you learn the most when you're having the most fun -- like when you're sliding down Uncle Beazley's neck!



## Administration Highlights

### Management Priorities

Four key areas comprise the management priorities in the Areas of Emphasis: maintain effective communication; continue to improve staff quality; critically evaluate programs; and elevate management's use of information.

Maintaining effective communication between central and bureau management will be achieved in a variety of ways. During the planning period, one notable communications conduit will be continued effort to improve the Institution's planning. Working with the Office of Planning and Budget, the Institution's senior management will utilize the planning process to identify new ideas for program and operating improvement. The planning process permits creative, new ideas to surface from all staff, and it serves as a mechanism to facilitate the establishment of priorities for the most effective allocation of resources.

The Institution will continue its efforts to improve staff quality, with particular emphasis on equal employment and affirmative action initiatives. The Committee for a Wider Audience and Cultural Education Committee will assist Smithsonian management in identifying ways to broaden public participation in Smithsonian programs and to increase the numbers of minorities, handicapped, and women the Institution employs. The Office of Personnel Administration will facilitate the hiring of professional and other staff, assess job performance, and enhance benefits to attract and hold employees.

Examination of current allocations and base resource use for purposes of potential redirection to higher priority work will continue, as will greater use of contemporary planning techniques. The planning process for FY 1990-94 emphasized the critical evaluation of all programs and support activities and redirection of resources to more important efforts. Future planning efforts will utilize specific program reviews to make evaluation an important element of resource allocation decisions. In addition, the Office of Survey Research Programs will continue to improve the Institution's understanding of its visitors and other participants in its programs through the use of modern survey techniques. The Office of Audits and Investigations and the Management Analysis Office will continue to assess operations and the financial and management functions.

The Institution is undertaking or has planned several efforts that will elevate management's use of information about resource distribution patterns to facilitate analysis of relative resource needs. These efforts include:

1. The development of new information sub-systems drawing on the recently implemented personnel/payroll system at the Department of Agriculture's National Finance Center. One such system will permit better analysis of various categories of personnel costs and development of cost projections under alternative sets of assumptions. The new system will interface with information in the USDA payroll system and the developing Institutional accounting system. Additional sub-systems will provide increased access to personnel information and increased control over personnel resources; improve personnel services and controls to permit better tracking and follow-up on actions, development of new personnel transaction standards, communications with bureaus and offices and safeguarding data and files.

2. The installation of a new accounting system with an initial emphasis on the general ledger and the accounts payable system. The prototype system will be a commercially available accounting package in areas of accounts payable, purchasing and property management. Testing is currently underway and if successful, full implementation will be phased over the planning period.
3. The establishment of a coordinated effort to enhance automated collections information and research support systems. The Collections Information System (CIS) is being developed in a three-phase approach. The first phase was begun in FY 1987 and deals with the collections of the Museum of Natural History. The next phase has just begun and will deal with collections in the areas of Cultural History and Art History.
4. Improvement of the quality and reduction of the cost of personal computer maintenance. A pilot project was begun in FY 1988 and will be completed in FY 1989. Over the planning period, this study will determine the most efficient and effective way to maintain the inventory of personal computing equipment at the Institution.
5. Evaluate personnel procedures and systems. The Institution has contracted with the National Academy of Public Administration (NAPA) to identify possible changes to current personnel procedures and systems, and to update and improve operations to meet future Institutional requirements. The NAPA project team will determine what the service expectations of the Institution's bureaus and offices are in the area of personnel operations, and recommend changes or refinements to the current system.

#### Administration Priorities

The Institution will seek to alleviate funding deficiencies in a variety of programs. Of primary importance is the continued monitoring and improvement of mechanical and security operations at the Quadrangle and to ensure the appropriate levels of protection and building management resources.

Many of the program activities in Administration are generally recognized as ongoing. Among these are the Facilities offices which plan to utilize advanced technology in a coordinated fashion to improve project management, reduce paper volume, cope with higher workloads, and produce more effective communications among the support offices and with users. Other ongoing activities are fire protection, environmental management and safety, and the identification, handling, and disposal of hazardous materials. Increased security for buildings and their contents will result from completion of the proprietary alarm system and the ongoing program of upgrading alarm and other security equipment and devices. Facilities offices will give special attention to building condition surveys; to identifying space and facilities requirement; to long-range facilities planning to eliminate the backlog of essential maintenance and repair of buildings.

## **CHAPTER 8: FACILITIES PLANNING, CONSTRUCTION, REPAIR AND RESTORATION**

The Smithsonian's responsibility for its museum buildings and other facilities requires a continuing program of repair and maintenance (some of which is accomplished by staff with funds provided in operating budgets), renovations and restorations, and new construction. The objectives of this program are to provide appropriate, safe, and accessible facilities for research, education, and care of collections. Federal appropriations are the primary source of funds for this work, but, starting with the funding of the original Smithsonian Institution Building, other sources of nonappropriated funds have at various times become available for particular projects. Maintenance and preservation of facilities to assure their long-term operation is one of the Institution's highest priorities and reflects the Institution's great concern for the condition of its buildings, many of which date back to the turn of the century or earlier. Many millions of dollars are required each year for this effort, as well as to assure compliance with safety codes.

The Institution has made considerable progress in determining the extent of need for additional facility support and has completed or has undertaken a number of critical facilities-related projects; however, the Smithsonian must continue to apply itself to diminishing the identified backlog of repair and restoration work on facilities and to replacing major building systems. The first section of this chapter presents those repair and restoration projects. The second section of this chapter presents the Institution's longer-range plans for construction. Implementing a Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission, the Institution has been renovating and improving the Zoological Park. This activity, begun in 1973, continues, and the third section of this chapter will discuss it.

### **Construction Planning**

An essential part of effective facilities development is the ability to identify, assess, and prioritize major requirements, and to make sufficiently detailed long-range plans which provide the Institution's managers with accurate project descriptions and estimates of construction and operation costs. Managers need such plans in order to identify and address issues affecting the project before seeking approval from Congressional committees and review commissions. The Institution is in the process of developing this capability and will seek an appropriation of \$730,000 in FY 1990 for construction planning. With these funds, the Smithsonian will continue feasibility studies, will develop planning and conceptual designs on which to base more precise descriptions and construction cost estimates, will establish operating and logistical support requirements, and will, as required, assess environmental impacts for the highest priority construction projects Smithsonian management has selected.

### **Repair and Restoration**

The Repair and Restoration of Buildings (R & R) account funds building repairs, restoration and remodeling thereby bringing buildings into conformance with life safety and health regulations and replacing or renovating major building equipment or components. This effort is a substantial one because the Institution's buildings and facilities (other than the Zoo) consist of 14 museums and galleries in Washington, D.C. and New York City; facilities at Suitland, Maryland, for the preservation and storage of





Once completed, the new base camp for the Whipple Observatory will house administrative offices, workshops, the motor pool, and other support activities, as well as a visitors' center. Located within the Coronado National Forest, the base camp will also serve as an off-loading point for commercial equipment and supply deliveries to Whipple. Most importantly, it will be eight miles closer to the observatory than the current offices and will be on the same bank of the Santa Cruz River as the observatory. Whereas the current offices are one hour (18 miles) from the mountain, the new site will be only a half hour from the mountain. Accordingly, staff will be able to respond to emergencies much more quickly, and wear and tear on vehicles, which principally results from crossing the desert, should decrease. Should the Santa Cruz River Bridge wash out, as the other river crossings have in the past, the base camp staff would still be able to transport generators and other heavy equipment to the observatory, because they would not have to cross the river. (artist's rendering)

collections; centers for biological research, conservation and education in Panama and on the Chesapeake Bay; a center for astrophysics in Cambridge, Massachusetts; and the Whipple Observatory on Mt. Hopkins near Tucson, Arizona.

In recent years, funding levels for maintenance, repair, and preservation of buildings have not kept pace with the need, resulting in a currently identified backlog of \$197 million in R & R requirements. The emphasis throughout the planning period will be on implementing a program to identify more fully the present and future requirements of the Institution's buildings and to eliminate this backlog. During the planning period, the Institution will address a number of major problems including:

- installation of fire detection and suppression systems required throughout Smithsonian buildings to meet current fire codes
- removal or containment of dangerous substances, such as asbestos, which are present in many buildings
- replacement of deteriorated plaza walking surfaces at two museums, and
- major replacement of electrical and of heating, ventilating, and air conditioning (HVAC) systems at the Natural History, American History, Arts & Industries, and American Art and Portrait Gallery buildings.

The R & R account consists of two sub-accounts: Repairs, Restoration and Code Compliance; and Major Capital Renewal. The sub-accounts are detailed in the next two sections.

#### Repairs, Restoration and Code Compliance

Funding in this sub-account is used to conduct routine repair and restoration projects including: facade, roof and terrace repairs; access, safety and security improvements; fire protection and suppression projects; utility repairs and improvements; and advanced planning and inspection for such projects. During the planning period, the Institution will continue to seek federal funding to eliminate the backlog in these projects. Currently, the backlog of repair and restoration projects approaches \$200 million.

#### Major Capital Renewal

Every building reaches a point when its owner must replace the building systems or components. Despite the best of care, HVAC systems, for example, reach an age when no reasonable amount of repair can keep the machinery running. A major overhaul of electrical and plumbing systems is required to replace deteriorated equipment, wires, and pipes.

A number of the Institution's historic buildings have already reached or will reach, during the planning period, the age at which the Institution must undertake cyclical renewal of building components and systems. Unless the Smithsonian pays extraordinary attention to the specific needs of its older buildings now, the Institution risks the loss of their operational integrity and increases the possibility that equipment and systems failure may require the closing of significant portions of buildings dedicated to

exhibitions, collections storage, and research activities. The Institution has already undertaken a significant portion of this cyclical renewal, but further analysis of the condition of the Smithsonian's older buildings will add to the list. Some of the ongoing capital renewal projects are the following:

1. In 1982, a study of the HVAC system of the American History building recommended replacement of the deteriorated heating, ventilating, air conditioning and refrigeration equipment and controls in the now 24 year old building to assure provision of required environmental conditions in an energy efficient manner. A 1986 implementation plan incorporates anticipated fire protection and asbestos removal work, with HVAC repair, in such a way that vertical segments of the building can be isolated and work required in each segment accomplished at the same time. This scheduling will result in less disruption to the Museum's activities and will save money as well by allowing award of a single major contract for the entire project. The Museum will synchronize its exhibition reinstallation and other activities with the plan to take maximum advantage of the "down-time" in each area of the building. The project is scheduled for completion in 1991.
2. Over the past several years the Institution undertook separate studies of energy conservation, fire protection and suppression, communications, security upgrading, asbestos abatement, and other remedies to building deficiencies, especially in the HVAC and electrical systems of the Natural History Building. The studies revealed that the building requires extensive work, and managers attempted to develop a schedule that would economically sequence the construction while limiting major disruption to the Museum's activities. The principal components of this project are the replacement of the HVAC and major electrical equipment in the building, including the automatic temperature control system. Ninety percent of the electrical lighting and power panels are at or near the end of their useful life. The main high-voltage switchgear equipment serving the transformers for the Natural History as well as the Freer Gallery, Arts and Industries and Smithsonian Institution Buildings, is approximately 40 years old. The Institution must replace these and related electrical equipment components because these mechanisms are difficult to repair due to the unavailability of spare parts. Fire protection work will be incorporated into the project, along with removal or encapsulation of asbestos insulation in the attics and on equipment, duct work and piping throughout the building. Modifications will also be made to the building envelope to improve energy efficiency.
3. One of the finest examples of Victorian architecture in the nation, the Arts and Industries Building, originally designed to house representative artifacts of the Philadelphia Centennial Exposition, also needs extensive repair. The underground utility trenches located within the building date from 1881, like the building itself. Inspection, maintenance, and alterations of the building utility systems have been disruptive, difficult, and costly because the tunnels are small and provide minimal or absolutely no access to the piping and electrical circuits within them. Asbestos insulation covers some pipes within the tunnels. The Institution must renovate these utility tunnels before it can refurbish the HVAC, electrical, and other utility systems now reaching the end of their useful life.



4. The 24 year-old HVAC system in the American Art and Portrait Gallery Building is in poor condition, and the Smithsonian must replace it to ensure its continued operation. While renovating the HVAC, the Institution will improve the building to foster the environmental conditions necessary to preserve the collections housed in the building. These improvements will, for example, provide more precise control of humidity and provide building technicians with the capacity to operate the heating and cooling systems simultaneously during the transitional seasons to maintain appropriate temperatures. In addition, the phased project will include replacement of all windows with double-glazed windows and the installation of waterproofing and water detection systems.

### Construction

Numerous construction projects are currently underway or will begin shortly at the Smithsonian's facilities on the Mall, in the State of Arizona, and in the Republic of Panama. During the planning period, the Quadrangle-Freer linking tunnel project (supported with Trust funds and Federal appropriations), and the Tupper project at the Tropical Research Institute (financed with appropriated and donated funds), will be completed. The Whipple Observatory's base camp and the Tropical Research Institute's Barro Colorado Laboratory will be completed over the period with funds appropriated in FY 1989. The FY 1990 budget request seeks \$3.5 million for continued construction of research and laboratory facilities at the Tropical Research Institute including relocating and upgrading of the Atlantic research field station and facilities in the San Blas archipelago. Also, included in the FY 1990 request are: \$6.5 million for continued work on the Amazonia Exhibit as part of the Zoological Park's Aquatic Habitat project and for a variety of projects and repairs at the Zoological Park's Rock Creek and Front Royal facilities; \$1.8 million to begin the design of the renovation associated with the General Post Office Building; \$730,000 for the planning and design of other Institutional projects; and \$4.1 million to configure space more effectively and make other improvements to accommodate current and planned activities at various Smithsonian facilities. These and projected future projects reflect the Institution's commitment to improvement of facilities supporting research, exhibitions, collections management, administration, and services to the public. The Institution will need to construct new buildings and to expand and improve existing facilities to accommodate growing programs and to replace inadequate or leased buildings. In the next several years the Institution will complete a comprehensive survey of facility requirements to project long-range construction needs well into the next century. Current estimates of the total requirements for funding the construction program total over \$900 million. The following sections present the key elements of the planned construction program.

#### Tropical Research Institute (STRI)

The Smithsonian Tropical Research Institute (STRI), located in the Republic of Panama, is the nation's principal center for tropical biology. Most existing STRI facilities include buildings constructed in the 1920s and 1930s and renovated structures obtained from the U. S. military and other agencies. With the exception of the library building (opened in 1984) and the laboratory and conference center now under construction at the STRI headquarters Tivoli site, the current STRI facilities are inadequate because of age, size, safety, and health standards. The Smithsonian's current research objectives include a coordinated effort to improve science facilities



If you lived in California and wanted to snow-sculpt an architecturally distinct building that few people there had seen, what would you pick? The Smithsonian Castle, of course!

Boreal Ski Resort, near Lake Tahoe, California, wanted a striking edifice before which to stage its February-March '88 winter carnival, so the resort erected the Castle as a "snow palace," measuring 66 feet wide and 41 feet high.

The ersatz Castle proved the main attraction of the carnival, receiving coverage on over 30 newscasts and in six major West Coast papers. (photo courtesy of Boreal Ski Resort)



commensurate with the Institution's longer range scientific goals. The Institution completed a plan in March 1986 to assist in guiding this program and Public Law 99-423 authorized construction for development of improved research facilities at STRI.

Barro Colorado Island, located in the middle of Gatun Lake, a key component of the Panama Canal, has served as an important research center for tropical biology since 1923. The Institution received an appropriation of \$2.7 million in FY 1989 for design and construction of new laboratory facilities at Barro Colorado Island. In addition, STRI plans a new laboratory, dormitory, and sewage system to replace facilities at Galeta Point. Also planned is the replacement of the research station in the San Blas Archipelago; a new facility will allow for more modern research techniques to occur in a safe environment. The Institution is requesting \$3.5 million for these projects in the FY 1990 budget.

STRI is responsible for more than 60 vehicles, a major research vessel, and dozens of small boats, in addition to normal building maintenance. At present the maintenance needs of its geographically dispersed facilities are performed in the bottom of an old torpedo factory; the top floor houses research offices. In order to provide for adequate maintenance, STRI plans a new central facility with modern equipment. During the planning period, STRI will design and construct a new workshop and maintenance facility. In addition, STRI will make a number of minor improvements to facilities using the R & R program, such as renovation of an apartment building at the Gamboa site for use as a dormitory, and construction of needed housing facilities at Naos.

#### General Post Office Building

Since 1958, when the Institution acquired the Patent Office building, it has been interested in obtaining the historic General Post Office building, which is immediately across F Street. Both buildings are the work of America's first native-born professional architect, Robert Mills of South Carolina (designer of the Washington Monument and the Treasury building). The Institution intends to use the General Post Office (the fifth oldest Federal building in Washington, D.C. and a landmark building in its own right) for museum exhibit and support requirements of the Institution.

Congress enacted legislation in 1984 (P.L. 98523) authorizing the transfer of the building from the General Services Administration (GSA) to the Smithsonian without reimbursement. The previous occupant, the U.S. International Trade Commission, has now been relocated and the GSA is prepared to transfer the building to the Smithsonian. Preserving this historic landmark will require a comprehensive program that must meet the special requirements of museums for fire protection, climate control, and safety and accommodation of visitors. In FY 1989, the Institution will further define the use of the building and plan the renovation; the Institution received resources to operate the building in a caretaker status, without programmatic occupation, until construction commences. Interim arrangements might also be made with GSA for continued operation and use of the building until renovation funding is received.

#### Air and Space Museum (NASM) Extension

Because of the size of air- and space-craft, it is not feasible to provide collection storage space in the Mall building. Therefore, the Air and Space Museum has used





The new restaurants in the Air and Space Museum (NASM) serve museum visitors with over twice the seating capacity of the previous facilities on the third floor of the Museum. A cafeteria named "The Flight Lines" comprises the lower level of the museum addition and seats 780 patrons. The upper level, accommodating 180, is a full service restaurant called "The Wright Place." The two new facilities are more accessible, offer a more varied menu, and provide more amenities than their predecessor. They are the only year-round, Smithsonian-operated public facilities on the south side of the Mall. (photo by Mark Avino)



temporary metal storage buildings at a 21-acre site at Suitland, Maryland acquired in the mid 1950s and now known as the Paul E. Garber Facility. These original temporary buildings and additional ones built there are filled to near capacity. Over the years the Suitland area has developed, and transportation of large modern aircraft to the facility is extremely difficult, even if dismantled. Under consideration are potential locations at or near airports in the Washington region that could accommodate storage, research, and exhibition structures and could receive by air transportation new objects such as the recently acquired space shuttle Enterprise and a promised Concorde. Preliminary informal discussions are ongoing about the potential sites and uses with several interested parties. Such a facility could also serve to highlight other allied disciplines at the Institution through interdisciplinary exhibition and outreach programs.

#### Natural History Building (NMNH) - West Court

The Institution has recognized a need to expand food service and other facilities for the public at the Museum of Natural History. Attention has focused on the feasibility of expanding the West Court structure to increase the space available for food service, museum shop, and educational activities of the Museum. The Institution is considering raising the present roof over the West Court to the maximum height consistent with the roof line of the building and to add four new floors. With rearrangement and renovation of the present space, a total of six or more floors would be available for public access. In 1988 the Museum completed a concept study for the use of this space.

#### Administrative Service Center

The current lease on the North Capital Street building which houses the Smithsonian Service Center currently expires in the fall of 1992; the Institution is exploring renegotiation of the lease to 1998. Because of the high cost of leasing space, the Institution is searching for permanent space to house the light industrial and administrative functions now at 1111 North Capital Street. This new space would also house other support activities now on the Mall which are expected to outgrow their present space or whose space is required for museum programs. The Institution currently estimates that it requires approximately 400,000 square feet in a location near the Mall.

#### Museum of American History (NMAH) and Other Collections Storage

Because storage space has long been exhausted at the Mall Museum and in its temporary buildings at Suitland, the Museum of American History has documented both its immediate and long-term needs in the context of the Smithsonian's master planning effort. A space planning consultant conducted the study in 1986 in coordination with the Institution's Office of Design and Construction.

Immediate needs result from the renovation of the Mall building and the reinstallation of permanent exhibits, apart from the space needed for modest growth. Also, there is a need to relieve currently compressed and unsafe conditions. In future years, the Museum will need new space to substitute for the roughly 115,000 square feet in the temporary buildings at Suitland (these structures have been analyzed in the Smithsonian's site survey as having a life expectancy of no longer than 10 to 15 more years). Since half the NMAH collections, exclusive of stamps and coins, reside there, it is essential to have facilities ready in the next decade or so to assure that the national collections have proper housing.



Before construction of the Museum Support Center (MSC), the Institution had no facility in which it could clean and degrease its large whale bones. Now, in the Whale Room, technicians can prepare the whale bones in the 7,000 gallon whale rendering vat, shown in the center rear of the picture with its lid partially open, store the bones on the customized dollies pictured in the foreground, and hold dolphin carcasses in the freezer which is in the rear of the room to the left of the vat. The vat, large enough to hold the whale's skull--the whale's largest bone segment -- can also rehydrate desiccated bones.

The Whale Room has its own air handling and cleaning system so that rendering odors do not disturb other MSC employees or MSC's neighbors. The room opens directly onto the loading dock, and a ceiling-mounted chain hoist conveys large bones from the dock into the room, bones. The Whale Room's facilities were essential in the Institution's response to the East coast dolphin deaths during summer and fall 1987. (photo by Diane L. Nordeck)



The Suitland location seems ideal for fulfilling this and many of the Institution's other consolidation and collection management objectives. The building that opened in 1983 at Suitland permits the Institution to meet many collections storage needs primarily in the natural history area and to strengthen training and other conservation programs. A subsequent phase of development at Suitland would alleviate emerging collection storage pressures in the other bureaus. In the coming years, as currently envisioned, the next development steps for the Suitland properties include an additional pod for the current building, storage and laboratory space for the Museum of American History, the art functions, and a central facility for the libraries.

#### Cooper-Hewitt Museum

The Museum has experienced substantial growth in the size of its collections and in the number of visitors. Renovation of the Miller townhouse, and the creation of new space, are required to assure adequate storage and exhibition of collections and to support educational activities of the Museum.

#### Anacostia Museum

The Museum's administrative staff and exhibition functions recently moved to the annex adjacent to the current building at Fort Stanton Park. The Museum plans to explore in the future the possibility of development of further museum accommodations and new facilities to provide expanded operations.

#### Administrative Office Building

Because the cost of leasing administrative space at L'Enfant Plaza rose from about \$8.50 per square foot in 1972, to an estimated \$25 or more in 1989, the Institution is currently reassessing its use of all Mall and leased space. Believing that it should rely as little as possible on leased space in the long run, the Institution will consider purchase or construction of office space near the Mall to minimize the longer-term budgetary effects of rent escalation.

#### Hirshhorn Museum and Sculpture Garden

In response to a number of space needs, the Museum completed a space plan in FY 1987. The Museum's collections storage conditions are particularly acute as it absorbs the Hirshhorn bequest and conducts an active acquisition program. The Museum also needs additional space for exhibitions and public services. The plan suggests a possible solution to the space problem through expansion of the Museum at its present site.

#### Museum of the American Indian

The Smithsonian has been exploring the possibilities of acquiring the collections of the Museum of the American Indian (Heye Foundation) and of constructing a new facility to house the Museum on the remaining site on the Mall. While Congress has reserved this property, bounded by Third Street, Maryland Avenue, Fourth Street and Jefferson Drive, for future activities of the Smithsonian (P.L. 94-74, approved August 8, 1975), the Institution has not defined the public uses of the site.

### Minor Construction, Alterations and Modifications

The Smithsonian requires the development of outlying facilities and other projects to meet programmatic objectives in the areas of research, collections management, exhibitions and administration. These projects will require approximately \$4 million to \$6 million per year throughout the planning period. The Institution is requesting \$4 million in FY 1990 for such projects including:

- construction of mezzanines in exhibit areas and modifications to the conservation laboratory in the basement of the American History Building;
- renovation of office and laboratory space at the Natural History Building;
- miscellaneous office space modifications in the Arts and Industries Building;
- renovation of attic space at the American Art and Portrait Gallery Building;
- office modifications at the Air and Space Building;
- renovation of a collection storage building at the Silver Hill facility;
- installation of a weather enclosure at the loading dock of the Museum Support Center;
- a greenhouse addition to the Mathias Laboratory at the Environmental Research Center;
- a new gallery lighting system for the Anacostia Museum;
- planning for renovation of the Miller House at the Cooper-Hewitt Museum;
- a building to house a new infrared telescope at the Whipple Observatory;
- expansion of the Photo Lab film storage vault at the American History Building;
- office and space modifications at the Museum Support Center for the Conservation Analytical Laboratory;
- restoration of a building at the Zoo's Front Royal Center for use of the Smithsonian Archives; and
- funding for planning future alteration and modification requirements.

### Zoological Park and Conservation Research Center

In implementing its Master Plan for its 163 acres in Rock Creek Park (Washington, D.C.) and its 3,150 acre Conservation and Research Center in Front Royal, Virginia, the Zoo is repairing, altering, and improving the plant property; constructing additions and minor new facilities including exhibits; and preparing plans and specifications for further construction. The Zoo has developed a five-year construction and improvement schedule for both the Rock Creek facility and the Conservation Center at Front Royal. The following paragraphs outline the projects anticipated over the planning period.

### Zoological Park Redevelopment

#### Olmsted Walk

Restoration and construction of the Olmsted Walk began in FY 1985 with emphasis given to preserving and enhancing the natural and historical character of the Park. The Zoo will renovate some exhibits along the Walk to enhance the visitors' experience of viewing the animals. This renovation will include new surfacing materials for the Walk, adequate drainage, new landscaping, additional benches and drinking fountains, and improved graphics. These improvements will unify the exhibits and grounds and provide

a pleasant and educational experience for the public at the National Zoo. The Zoo has completed the first and second phases of the Olmsted walk renovation.

To provide the visitor with a better view of the surrounding exhibits, the third and final phase will refurbish the Walk from just past the education building to the Great Ape Facility. The new walkway will consolidate fragmented smaller paths and when completed, in mid-1989, will provide unity and design through this congested section connecting Phase I and Phase II. New landscaping will buffer parking areas, create shade, add color, and develop diversity for the benefit of the visiting public.

#### Loop Trail

The Olmsted Walk project established a clear pedestrian "Main street" from the Connecticut Avenue Entrance down to the Rock Creek Entrance. This efficient route connects most of the Zoo's exhibit structures. However, it bypasses the entire Avian and Aquatics Complexes. The Loop Trail system will connect these two major exhibits and other animal areas with the main Olmsted Walk. The system will enhance pedestrian circulation throughout the Park.

#### Aquatic Exhibits

Unlike the aquarium in Baltimore, the proposed aquatic habitat facility will include not only fish but a full range of aquatic mammals, birds, reptiles, and amphibians. Another essential difference is that the NZZP will concentrate on freshwater animals while Baltimore concentrates on animals found in the marine ecosystem. Hence, the two facilities will be complementary rather than duplicative. Together with the invertebrate exhibit which opened in May 1987, the proposed aquatic habitat facility fills the last gap in the Zoo's presentation to the public of representatives of all the major animal groups. Previously, the Zoo emphasized terrestrial animals almost exclusively despite the fact that over 60 percent of the world's vertebrate animals are fish and despite the fact that the general public knows little about aquatic animals. The animals that will be exhibited include those not exhibited in most zoos, hence the proposed exhibit provides an excellent opportunity to educate and entertain the general public about these engaging and important groups of animals. The Zoo has scheduled the first phase, the Amazonian Exhibit, for construction. This exhibit will display aquatic mammals, appropriate fish, invertebrates, birds and amphibians, as well as vegetation in their natural habitat, a tropical forest and stream.

#### Parking Facility

For over a decade the Institution has entertained a long-range plan for a centralized parking facility at Rock Creek. Such a facility would allow the Zoo to use present surface parking areas as exhibitions space; these areas are in the core sections of the Zoo. By eliminating surface parking the Zoo is able to place exhibits in flat areas, appropriate to certain species, and increase the natural setting of the Zoo's core areas. If funds permit, the proposed parking garage would include approximately 1,100 spaces compared to the existing 250 spaces on the site contiguous to the present General Services Building. The construction would include a pedestrian walk and tunnel to allow visitors unimpeded access to the central Zoo animal area. At present this project is tentatively scheduled for construction in 1993 and 1994.

#### Grasslands and Forests Exhibits



The Zoo proposes to develop three exhibits during the coming decade, each representing a distinct ecological and geographic area. The Zoo has scheduled: American Grasslands, African Grasslands, and Forests. The first will be constructed in late 1993 and 1994.

The American Grasslands exhibit will replace Visitor Parking Lot B and will consist of two major habitats, the North American Prairies and the South American Grasslands. Separating the two exhibits, a planted berm will conceal a service yard and holding buildings. Bison, coyotes, sandhill cranes, prairie dogs, and gopher snakes will populate the Prairie exhibit. The American Grasslands exhibit will quarter mara, giant anteater, capybara, maned wolf, rhea, and guanaco.

The African Grasslands exhibit will also subdivide into two major habitats, the African Savannah Grasslands and the African Desert Grasslands. The exhibits will locate where the Hardy Hoofed Stock exhibits and bus staging area are now. The trails in the two subdivisions will include screening and specimen plantings to create the illusion of being in Africa. Animal species such as zebra, ostrich, wildebeest, flamingo, spotted hyena, blesbok, gerenuk, and dwarf mongoose will inhabit the new exhibit. A nocturnal exhibit will include species such as zorilla, aardvark, fennec fox, cobra, and insects. The Zoo plans to include gazelle, crowned crane, meerkat, duiker, and klipspringer in the Desert exhibit.

The Zoo will locate the Forests exhibit on the hilly terrain east of the Connecticut Avenue entrance. The exhibit will feature three major habitats: West African Forests, Southeast Asia Forests, and the Sulawesi Forests. The Zoo will include mandrill, leopard, bongo, Eld's deer, tapir, muntjac, anoa, and babirusa in the exhibit.

#### Renovation and Repairs

In addition to the redevelopment Master Plan, the Zoological Park is responsible for a continuing program of maintenance and repair of its sixty separate structures, of which eighteen are major, and associated grounds, utilities, and equipment. The current plant value is over \$100 million. Approximately \$2 million will be required annually for structural, mechanical, and electrical repairs and renovation of the physical plant to support the Zoo's mission at a satisfactory level.

#### Conservation and Research Center

##### Pachyderm Facility

This project, scheduled for 1993, will provide a facility to house large, hoofed stock for research and breeding. The site chosen is well suited for this purpose and will have minimal support requirements. The facility will permit the Zoo to pursue actively breeding programs for such critically endangered groups as rhinoceroses and tapirs.

##### Water System and Hydrants

The Zoo must replace worn and deteriorated water lines throughout the facility and must upgrade hydrants to meet fire and safety protection standards. This renovation will occur in FY 1991.



Renovation transformed the Zoo's three duck ponds, which were virtual formal gardens which happened to have ducks in them, into a wetlands habitat, containing only aquatic flora and now including geese, pelicans, storks, egrets, and herons, as well as ducks.

Previously, a pedestrian walkway encircled the duck ponds. Now, a boardwalk bisects the wetlands. Along this boardwalk not only will there be signs which explain the wetlands environment and feature related conservation issues but also volunteer guides who will discuss these issues with visitors. The pathway is a principle access to the Bird House. In winter, most of the waterfowl can find shelter under the boardwalk and warm themselves with heatlamps installed during the renovation.

Before, the three ponds shared a water supply and drainage system. Water ran from one pond to the other increasing the possibility of disease or parasite transmission from one pond to the other. Cleaning any one pond necessitated draining all three ponds. Now each pond has a separate water supply and drainage system.

The wetlands extends into the bald eagles' enclosed aerie (pictured at left), and in stations along the boardwalk visitors can take interactive quizzes about our national bird. (photo by Jessie Cohen)

### **Maintenance Facility**

To improve operations, security, and accessibility, Zoo management has decided to consolidate the maintenance trade shops that serve the Conservation and Research Center into one area. The Zoo will renovate and modify a group of supply buildings to serve as the new trade shops and provide parking for the Center's motor pool operations and off-site employees. The space the present shops vacate will be used to expand research laboratories and student housing.

### **Multi-Purpose Animal Facility**

This proposed new facility will provide needed additional space to support research and breeding programs for small to medium-sized endangered species of mammals. This facility will utilize the same passive solar heat/natural light that has proved so successful in the small animal facility for conservation and improved animal health. Management plans to locate the facility, scheduled for construction in 1991, in the middle of the Conservation and Research Center.

### **Wildlife Training Center**

Two buildings will be renovated in 1992 and 1993 for the Zoo's acclaimed Wildlife Training Course. The new center will provide classroom, laboratory, computer and cafeteria facilities for the several dozen international conservation students that take the course each year at the Conservation and Research Center.

### **Road Improvements and Extensions**

This project, scheduled for FY 1992, will repair and improve deteriorating roads in the middle of the Conservation and Research Center, as well as develop several new roads to outlying areas and animal facilities.





All Nippon Airways donated not only the Japanese spider crabs but also the construction funds for an aquarium in which to display them at the Zoo's Invertebrate House.

The Zoo designed the aquarium, which opened in May 1988, to meet the specific needs of the spider crabs. The crabs, which have no swimming appendages, are bottom dwellers; thus the tank provides a large surface area in which the crabs can walk about. All crabs are scavengers, carefully sorting through material on the sea bottom -- or tank bottom -- in search of food. Crabs in aquaria, engaging in this incessant sorting behavior, destroy the mesh material which underlies the rocks on the tank bottom and eventually tear through to the filters, which they can also damage. The filters for the spider crab aquarium are outside the tank so that they will not be susceptible to damage by the crabs.

The 3,500 gallon tank utilizes human engineering factors also. Unlike traditional aquaria, this tank is at adult eye level and tapers down to an appropriate height for children. Also, the tank's arc shape provides maximum viewing surface, and the display lighting, like stage lighting, dramatically varies in intensity. These human engineering aspects make the tank educational as well as entertaining. (photo by Jessie Cohen)



## APPENDIX I: COLLECTIONS-RELATED RESEARCH

Traditionally, the Smithsonian's collections have stimulated much of the Institution's research. This inspiration continues to occur, and this appendix briefly describes some of these research activities. An FY 1983 inventory highlighted, for Smithsonian and other researchers, the variety, range, and depth of the collections and the potential information they contain. This inventory and several recent improvements, such as the establishment of research and conservation laboratories and curatorial areas at the Museum Support Center, the provision of additional internships and fellowships, the upgrading and replacement of research equipment, and the growing importance of the Institution's international functions, combine to make the Institution an even more productive environment for collections-based research. The strength of the Institution's collections, the depth of the Institution's support, and the keenness of the staff's research interests will ensure the continued quality and intensity of the Smithsonian's future collections research.

### Air and Space Museum

The Air and Space Museum's rare Boeing 247 airliner has been the subject of intensive research efforts, which have resulted in a scholarly manuscript. This aircraft revolutionized commercial air travel in the early 1930s and pioneered modern airliner design. Using primary material, the author has thoroughly examined the story of this aircraft and its impact on the development of air transportation.

An S.I. Studies in Air and Space monograph will chronicle U.S. women's contribution to aviation in the years 1940-1945 and will appear in the Spring of 1989. Using primary source material donated to the National Air and Space Museum by the women aviators themselves, the author was able to chronicle the achievements of not only women pilots but women who are leaders in the aerospace industry, military aviation, and commercial air transport.

In 1989, NASM will publish *The Wright Flyers: The Study of the Process of Invention*, which will focus on the inventive process involved in the creation of the world's first airplane and subsequent Wright aircraft before World War I. Taking advantage of artifact-based research performed during the 1985 restoration of the 1903 aircraft, the author will use that research to supplement more traditional archival resources with the goal of more fully understanding the Wrights' achievement. Occurring before the public in one of NASM's galleries, the Wright Flyer restoration project included a companion exhibit about the Flyer's design and construction. Part of this exhibit was an operating reproduction of the Wrights' wind tunnel in which the curatorial staff ran through the pivotal experiments performed in 1901-02 to gain a greater understanding of how the Wrights arrived at their results. Another element of the project was a thorough artifact analysis of the Flyer by NASM staff, in cooperation with the Smithsonian Conservation Analytical Laboratory.

The Aeronautics Department is also planning a publication on the development of small gas turbine engines. This book will explore the history of this industry in the United States, utilizing the Museum's archives and photographs of engines in the collection.



At the Museum's Center for Earth and Planetary Studies, research on the origin of planetary surface features and terrestrial deserts utilizes the collection of more than four hundred thousand images and photographs of the Earth and planets. Planetary research has resulted in the publication of articles in professional journals detailing the structural evolution of the Moon and Mars. Terrestrial research on dune movement and surface changes resulting from climate exchange are based on a collection of Landsat and other remote sensing computer tapes from 1972 through 1975. These data are compared with recent satellite observations to determine year-to-year changes.

The research collections and the expertise of Center personnel are used in new exhibits as well as in the preparation and review of books for the general public. As part of the Smithsonian Institution's Quincentenary program, an atlas of Earth based satellite observations is being prepared for publication in 1992. Personnel at the Center are also responsible for advising in the Smithsonian Library of the Solar System, a multi-volume series published by the Smithsonian Press.

The Laboratory of Astrophysics began in FY 1989 at the National Air and Space Museum. Research activity in the Laboratory centers in infrared observations of star formation regions, active galaxies, planetary atmospheres and novae. This new department will also bring an increased dimension of physical and technical understanding of the field of astrophysics to NASM exhibits.

The Space Science and Exploration Department is completing an exhibition book covering the history of aerospace computing, titled *Beyond the Limits: Flight Enters the Computer Age*, to accompany the new exhibit gallery of the same name. The book will appear in April 1989. The exhibit will include seven interactive video programs and will open in May 1989. Another publication, *Our Weather from Above: America's Meteorological Satellites*, will provide a chronological overview of the past and present U.S. civilian weather satellite efforts. One section of the book will describe the artifacts in the NASM collection that relate to the history of weather satellites. These satellites and instruments are probably the only existing examples remaining on earth of certain technologies.

Requests from around the world for the study and use of the artifact collection in the Space Science and Exploration Department continue. This year researchers made extensive use of the space suit collection for patent research and overall information about space suit development. The Science Museum in London requested notes and photographs of the Museum's replica of Robert Goddard's March 16, 1926 rocket, in order to construct their own replica. A student conducting research on the development of docking systems for a Society for the History of Technology paper used the Apollo capsule docking assembly for his research.

The Space Science and Exploration Department has continued to conduct and organize videohistory sessions designed to document visually the Museum's Ultraviolet and E-ray detector collection and the collections of early Bennett RF mass spectrometers.

Planned for 1989, *A Catalog of the Art Collection of the National Air and Space Museum*, will list the entire contents of the art collection with the artist, title, accession number, medium, support, and date of creation. It will include essays on five aspects of the collection (aviation art, science fiction and space science art, prominent works in the NASM art collection, the NASA art program, and ballooning prints) and some color photographs.

A planned publication in the area of Collections Management is *Caring for the Collections of the National Air and Space Museum*. This book will cover the history of NASM's Paul E. Garber Facility and highlight the restoration of six important aircraft of the national collection.

### Archives of American Art

The Archives of American Art is the major national repository of primary sources for the study of art in the United States. The Archives' vast collections of visual and written documentation serve as the basis for virtually all research at the Archives. The primary users of the Archives' holdings are the thousands of scholars, students, journalists, collectors, and others who come to the Archives each year or who study the Archives' collections on microfilm at six regional offices and through inter-library loan.

Staff research concentrates in three areas: research to locate documents for acquisition, research to analyze and describe the holdings of the Archives and to make them more accessible to all potential users, and research that results in symposia, exhibitions, and publications.

Among recent projects undertaken by Archives staff is an exhibition commemorating the 75th anniversary of the Armory Show, the first large public exhibition of modern art in the United States. The exhibition opened in the Archives' New York offices in the fall of 1988. Symposia held this spring on the coming of modern art to California and to Chicago will result in book-length publications during the next two years. The Archives also plans a book illustrating the variety of ways in which artists use their sketchbooks as part of their "visual thinking." Finally, the thousands of historical photographs in the Archives will be the basis for a book on artists and their studios.

Special funding for a research fellow for 1988-1989 will contribute to a publication on a major new acquisition, the papers of Walter Pach. Pach was an influential art historian and critic who played a central role in assembling the Armory Show. Also, an Archives staff member is planning an essay for a catalog of the works of Seattle sculptor, James W. Washington, whose papers are in the Archives.

The Archives will produce two guides to resources for the study of art history in Chicago and Philadelphia based on three-year surveys in each city. Research to identify and acquire additional collections will continue in each city. Other guides planned include one to the hundreds of diaries, memoirs, and reminiscences among the collections and one for the records of the Vose Gallery in Boston, one of the nation's oldest and most important commercial galleries. Several potential publications also are under consideration, including guides to papers and other documentation of Asian American artists and to collections in the Archives which relate to the history of art in France.

Special, continuing research and conservation projects focus upon the Archives collections of photographs and works of art on paper. These include cataloging, research, and conservation with the aim of publishing guides to these special collections.

## Freer Gallery of Art

The results of curatorial research on the collections in the Freer Gallery of Art are most visible in exhibitions. However, the Gallery also makes research available to the public through collection research records, free gallery leaflets, public lectures and in published papers, articles, and catalogues, including *Ars Orientalis*, an Asian art publication which the University of Michigan and the Freer Gallery jointly produced. Although the Freer will close to the public in the fall of 1988, research on the collections will continue. After extensive renovation to the collection storage areas, the conservation laboratory, and the exhibition galleries, and the construction of a tunnel to the Sackler Gallery, the Freer plans to reopen in 1991. Research during this interim period will result in entirely new exhibitions for the reopening.

Specific areas of current research in Japanese art include painting from the Heian to Edo periods, calligraphy, Yokohama prints, and lacquer commissioned for "daimyo" patrons.

In the field of Chinese art, research continues on Chinese calligraphy and paintings of the Sung, Yuan, Ming, and Ch'ing dynasties. Research on the Che School will result in an exhibition of paintings after the Freer reopens. An article and a lecture published results of research on Chinese lacquers.

In 1973 the Freer published a catalogue, *Chinese Figure Painting*. This is the only scholarly study in this field, and the catalogue has been out of print for eight years. Revision of this original text for publication has necessitated a comprehensive review of all literature on that subject during the past fifteen years. The Freer will republish the catalogue during FY 1989.

In the field of Indian art, research during the last year focused on early 17th-century Mughal painting and the Rajput painting of Rajasthan. Other current research in the area of Indian art includes the study of Mughal gardens and garden architecture of the 16th to 17th centuries.

In the area of Near Eastern art, a catalogue is being prepared for mounting an exhibition in the Fall of 1988 of the Vever collection of Persian painting and related arts of the book. Freer staff continue research in 15th-century central Asian and Iranian art and architecture is being conducted in preparation for a major exhibition in 1989 in the Sackler Gallery. Objects in the Freer collections provide an excellent opportunity for comparative analysis with objects borrowed for the Sackler exhibitions.

Although the Freer is best known for its holdings in the arts of Asia and the Near East, it also houses a collection of works by American artists of the late 19th and early 20th centuries, including a major group of works by the expatriate artist James McNeill Whistler. Current American exhibits include paintings by Whistler, Dwight William Tryon, Thomas Wilmer Dewing, and John Singer Sargent. Research on Dwight W. Tryon will result in a major exhibition and catalogue of the artist when the Freer reopens.

The Technical Laboratory of the Freer Gallery is renowned for its research activities, in addition to ongoing conservation and restoration of objects in the collection. Research in the area of conservation concentrated on the extension of identification methods in the field of organic colorants in paintings and the lead isotope ratio analysis of Chinese bronzes in the Sackler collections. Specific Freer research



included the study of unusual copper green pigments on Ukiyo-e paintings, lead white on Japanese paintings, discoloration of lead white pigments on Persian paintings particularly in the Vever collection, identification of pigment samples taken from excavated objects (dated to the 5th-8th centuries A.D.) in Korean museums, microscopic identification of paper fibers from very small samples, and investigation of the metallurgy and properties of high-tin bronzes, including reconstructing the alloy and production methods used in making high-tin bronze mirrors from Aranmula, India. In addition an analytical project on Chinese Buddhist bronze sculpture (dated from the 3rd to the 16th centuries A.D.) has begun which studies the provenance and methods of manufacture of these bronzes and how they relate to the history of Chinese bronze metallurgy.

#### Arthur M. Sackler Gallery

Research is the fundamental focus of the Arthur M. Sackler Gallery, providing the basis for exhibitions, publications, and collections acquisitions. Additional research is further made available to the public through collection research records and public lectures. Monthly lectures by members of the curatorial staff of the Sackler and Freer Galleries include topics of current research by both museums; additional lectures by non-staff discuss topics related to Asian art and culture. Publications include not only exhibition catalogues, but free gallery guides, papers, and articles. The research program involves both visiting scholars as well as the curatorial staff.

An extensive exhibition program in the new building displays the initial Sackler gift together with other major objects on loan from the private collection of Dr. Arthur M. Sackler. The inaugural exhibitions include "In Praise of Ancestors: Ritual Objects from China," "Monsters, Myths and Minerals," "Pavilions and Immortal Mountains: Chinese Decorative Art and Painting," "Nomads and Nobility: Art from the Ancient Near East," "Persian and Indian Paintings: Selections from a Recent Acquisition," "Temple Sculptures of South and Southeast Asia," and "Chinese Buddhist and Daoist Imagery."

Subsequent to the inaugural exhibitions, several new exhibitions were opened. These included "Terracottas from South India," "Chinese Scholar's Studio," the museum's first traveling exhibition, and "The Art of India."

Future exhibitions will include those originated by the Gallery as well as traveling exhibitions organized elsewhere. The Gallery will draw exhibitions from international public and private collections as well as from the Sackler collection. The Gallery expects many of its exhibitions to travel to other museums and institutions. Future exhibitions will include "Recent Japanese Acquisitions," "A Jeweler's Eye: Islamic Arts of the Book from the Vever Collection," "Timur and the Princely Vision," "Masterpieces of the Chinese School of Painting," "Mughal Gardens," "Photographs by Raghubir Singh," "Yokohama Prints," and "Paintings by Chang Dai-Chien." Under consideration for future exhibitions are Chinese mirrors, Ordos bronzes, Chinese lacquer, Indian and Southeast Asian sculpture, Chinese garment hooks, Sasanian metalwork, Chinese furniture, Near Eastern ceramics, Far Eastern ceramics, and Chinese sculpture. Research catalogues will accompany these exhibitions.

The Gallery's publications program includes a quarterly magazine, *Asian Art*, intended for the general public, although the results are expected to contain the results of most recent research. This publication, produced in cooperation with Oxford University Press, has color plates and informative text relating to various research

activities, the permanent collection, recent acquisitions, and special exhibitions. Additionally, the Asian art history journal *Artibus Asiae*, now totally funded by the Sackler Foundation, is produced by the Gallery (although its contents are independent of the Sackler Gallery programs and collections). Exhibitions, exhibition catalogues, and lectures at the Gallery are generated from specific research projects. Free leaflets and gallery guides are provided in the exhibition galleries.

Following the long practice of the Freer Gallery, the Sackler conservation effort includes object research to understand the origin of objects and therefore better develop the proper treatment of them. Expansion of the conservation facilities in a renovated Freer building will accommodate the requirements of the Sackler programs. After the public opening of the museum in September 1987, the staff of the Conservation Lab concentrated on particular items for future exhibitions such as the Indian terracotta sculptures, a Japanese palanquin, and Persian paintings.

### Cooper-Hewitt Museum

The Cooper-Hewitt has more than one hundred sixty-seven thousand items in its permanent collections. The Museum schedules more than thirteen special exhibitions annually, and these often generate research on the permanent collections. An exhibition provides the Museum's small staff an opportunity to exhibit its own collection objects and to publish information developed by curatorial research. Future special exhibitions may reflect the results of research on selected landscapes, figure studies, and illustrations from the Department of Drawings and Prints' rich holdings of nineteenth-century American works, printed textiles of the early twentieth century, and nineteenth- and twentieth-century French decorative arts. Longer range planning involves collection materials relevant to designs and objects generated by the universal human experience of death, marine life forms in the history of art and design, domestic cutlery and tablewares, oil sketches and drawings by the American artists Frederic Edwin Church and Daniel Huntington, the oeuvre of the French architect Gilles-Marie Oppenord, European ornament prints of the sixteenth and seventeenth centuries, and contemporary textile design trends.

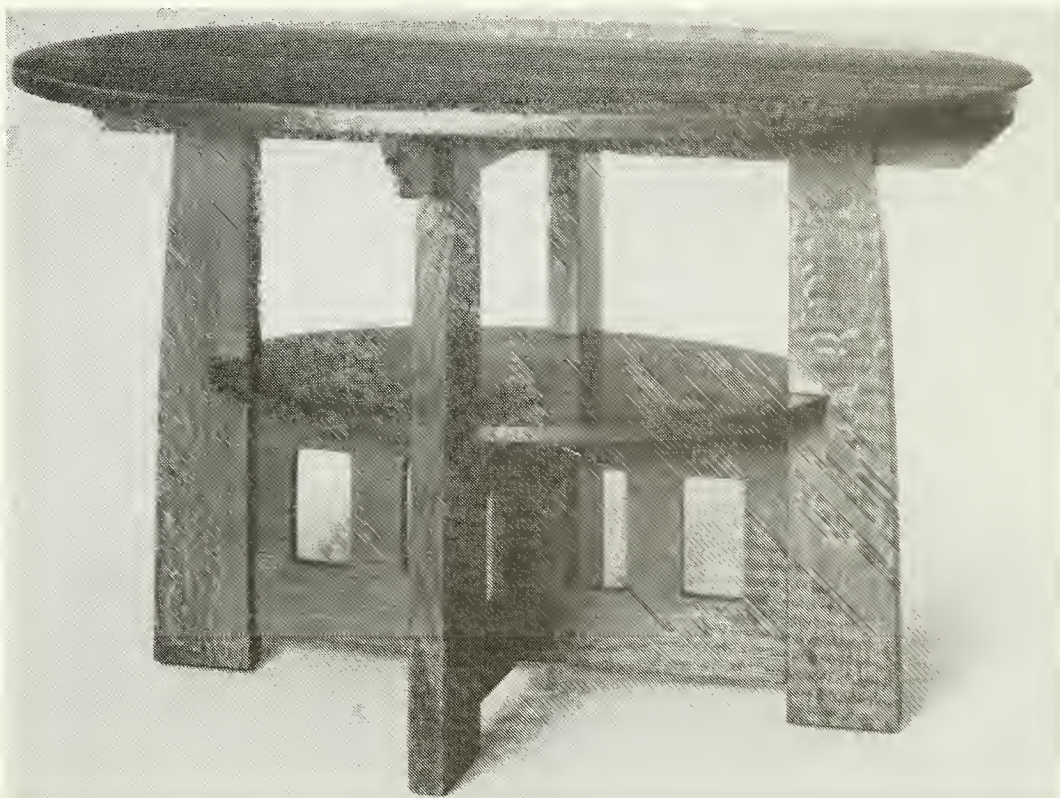
Additionally, research continues on the structures, patterns, uses, and manufacture of lace, on draw-loom woven fabrics from the fourth to the twentieth century, and the repeat as a design determinant and technical aspect of patterned textile manufacture. Periodically, the Curator of Textiles offers a special course in textile structures analysis for an invited group of professional colleagues from across the country. Cooper-Hewitt collection materials provided the working materials for the course, as they do for many of the courses offered in the Museum's graduate study program in the history of the decorative arts. In the Drawings and Prints Department, new collections-based research now includes ongoing work with a collection of 1,488 documents of textile and wallcovering designs, from the Wiener Werkstatte Archive. Such a vast collection is unique in the United States, and only the holdings of the Museum fur Angewandte Kunst in Vienna, with which the Cooper-Hewitt will coordinate its studies, match the collection on loan from the Wiener Werkstatte Archive. Another acquisition-related area of investigation is the production of propagandistic and decorative domestic ceramics in the Soviet Union from the period of the Russian revolution to the present.



The lamp and table exemplify the late 1800's early 1900's reaction to overstuffed Victoriana and machine-produced bric-a-brac. This reaction, known as the Arts and Crafts Movement, advocated American Indian rugs, Navajo blankets, Colonial artifacts, and other handcrafts which effused goodness, simplicity, and character. Both the lamp by Dirk Van Erp and the 1905 table by Charles P. Limbert Co. epitomize the direct and simple handcrafted design valued by the Arts and Crafts Movement.

Figures in this movement were Mission Oak furniture maker Gustav Stickney and architect Frank Lloyd Wright. This movement popularized the bungalow, the Wright-inspired Prairie School house, and the Spanish mission-style home.

In April 1988, the Cooper-Hewitt opened an exhibit treating this movement and entitled "The Art That is Life: The Arts & Crafts Movement in America, 1875-1920." (The lamp is from the collection of James and Janeen Marrin, and the table is from Robert Edwards' collection.)





## Conservation Analytical Laboratory

The Conservation Analytical Laboratory (CAL) researches the preservation, technical study, and analysis of museum objects and related materials. Hence, most research at CAL is by its very nature collections-oriented, and to a large extent collection-based.

Studies in conservation science, as well as in conservation treatment technology, concentrate upon problems encountered by conservators in the care of objects in the collections of Smithsonian museums and elsewhere. Often, therefore, these studies involve the use of actual collection items as research materials. For example, the program of research in the conservation of photographic materials, a rather new endeavor which should develop appreciably over this five-year period, began as a direct result of an institutional survey of Smithsonian photographic collections and their preservation problems. The first project in this program will focus on preservation problems of collodion-glass negatives and objects from the collections of the National Portrait Gallery will be the basis of this study. Similarly, a recently completed study on a newly developed cleaning technique for marble statuary depended on the treatment of objects from various Smithsonian collections for the testing of its efficiency. Even when the research does not directly involve the use of actual objects from the collections, the results still will have a direct impact on the care which they will receive in museums. For example, the results of the study on the effects of various fumigants on museum objects will probably affect the maintenance programs in the Smithsonian museums, and studies on mechanical properties of lining adhesives and backing materials will generate considerable knowledge of immediate relevance to the painting conservators in various Smithsonian museums. As such knowledge is, of course, equally of interest to museum professionals outside the Institution, CAL distributes the results of the research to as wide an audience as appropriate, through publication in professional journals and presentations at professional conferences.

Technical and analytic studies often involve Smithsonian collection items. For example, the systematic studies of works by Albert P. Ryder and Thomas W. Dewing are joint programs with the staff of the National Museum of American Art and concentrate upon paintings by these artists from the collection of this museum. Similarly, technological and analytical studies of archaeological materials often utilize objects from Smithsonian collections such as the National Museum of Natural History or the Sackler Gallery as well as materials from collections outside the Smithsonian.

## Hirshhorn Museum and Sculpture Garden

Since 1974, the Hirshhorn Museum and Sculpture Garden, through its Department of Painting and Sculpture, has conducted a program of intensive research on its collection of modern and contemporary art. The Collection Archive maintains the primary documentation on the collection, together with interpretive research; the Archives serves as the central information file on the permanent collection. Among the major research projects undertaken within the past ten years is an international biographical survey of living artists represented in the permanent collection. The curators in the Department of Painting and Sculpture have also devoted intensive research to the history of casting of modern sculpture, with particular emphasis on the problems of connoisseurship, foundry marks, and editions. With the bequest of Joseph H. Hirshhorn's personal collection in 1981, the curatorial staff has undertaken a massive effort to research and catalog the

more than five thousand works bequeathed to the museum. Jointly, the curatorial staff, the director, and the deputy director conduct a systematic monthly artist-by-artist review of the museum's entire collection, and this monthly review supplements the ongoing catalog of the Hirshhorn bequest.

Exhibitions produced by collections-based research continue to play an increasingly important role in the museum's overall public program. To mark the seventy-fifth anniversary of the landmark Armory Show of 1913, the museum mounted "The New Spirit": Artist Organizers of the Armory Show" (December 21, 1987-March 13, 1988). Other Recent exhibitions that resulted from these research efforts included:

"Bridging the Century: Images of Bridges from the Museum's Collections" (March 11-May 24, 1987)

"Sea and Shore : Selections from the Permanent Collection" (October 1, 1987-May 15, 1988)

"Pattern Images: Works on Paper from the Museum's Collections" (March 27-June 28, 1987).

"Arnold Newman Photographs Artists" (July 1-September 27, 1987).

Similar projects currently in an exploratory stage include collections-based exhibitions on the American industrial landscape, on artists as social critics, and on the theme of cafe life. Also the Museum plans an exhibition of photographs by Thomas Eakins, a project associated with the museum's ongoing review and conservation of its Eakins-Murray notebooks.

#### Museum of African Art

At the Museum of African Art, curatorial research is the foundation upon which all of the museum's public and scholarly programs rest. New, untried, and often seminal projects can be conceived and developed because the entire research staff is sharply focused on the visual traditions of one important region, Africa south of the Sahara. This has led the Museum to use closed working symposia, often multi-disciplinary in composition, to explore and develop new exhibition topics and content for attendant publications. Now under way are working symposia/conferences on "Archetypes in African Art," "The Art of the Luba," and "Nomadic Art and Architecture." The results of this approach will culminate in major exhibitions and publications which the Museum will produce. In 1988, the museum published a monograph by Dr. C. Geary, a Rockefeller Residency Program fellow at the museum in 1987, to accompany the exhibition, "Images from Bamum: German Colonial Photography at the Court of King Njoya, Cameroon, West Africa, 1902-1915." The 144 page book examines in depth the larger cultural, social, and economic context from which the images arose. Other projected exhibitions will feature African pottery, the commemorative screens of the Ijo of Nigeria, and textiles of the Shoowa people of Zaire.

The Museum's Photographic Archives, which includes over seventy thousand black and white photographs and nearly one hundred and fifty thousand color slides, is the center for ongoing research into the context of African visual traditions. Many of the

images are of historic importance; others capture the arts in their traditional settings. These images, important to researchers dealing with meaning and context studies, also figure in photographic exhibitions and catalogue publications.

In the area of ethnographic conservation, the Museum of African Art now has a facility which will permit it to contribute to the development of important research work both nationally and internationally. Beginning in 1989, the museum plans to conduct analyses on a corpus of Nigerian metalwork, a recently identified, barely researched metallurgical tradition. This project, which will include systematic research on the museum's cast copper alloy Benin (Nigeria) objects, is in preparation for a proposed co-organized exhibition with the British Museum.

The Museum has been asked to accept interns in ethnographic conservation training. To date, interns from the New York University Institute of Fine Arts Conservation Training Program and from the London Institute for Archeology have been accepted for a year of training in the National Museum of African Art's conservation department.

#### Museum of American Art

Collections-related research projects at the Museum of American Art include: a study of the artist Albert Pinkham Ryder, which will result in both a book length evaluation of his composition and technical accomplishments and a related exhibition; preparation of a Joseph Cornell catalogue raisonne; research on a major Museum acquisition of 1986, the Herbert Waide Hemphill Collection of American Folk Art, focusing on the 378 objects and their context, as well as their creators, and resulting in a 1990 exhibition and major catalogue; and continued research on another major museum acquisition, the Patricia and Phillip Frost Collection, which will document the careers of charter members of the American Abstract Artists group of the 1930s and 1940s, in a 1989 publication and exhibition.

A variety of research projects of lesser magnitude include: research for individual listings of the Museum's works by various artist groups (e.g. Hispanic Americans, Afro-Americans, Western Artists etc.) to facilitate response to a growing number of information requests; research on the museum's European paintings to enhance the quality of information available to prospective borrowers of these works; and continuing research for a complete list of all sculpture in the Museum's collections.

*Smithsonian Studies in American Art*, a journal first published bi-annually in 1987, will begin quarterly publication in 1989. Co-published with Oxford University Press, the journal continues to present the latest research by scholars on American art and material culture. The expansion of its editorial board of external scholars has broadened the range of expertise brought to the evaluation of journal manuscripts. The fall 1988 issue will feature an article by National Portrait Gallery Curator, Frederick Voss, on the 19th-century political illustrator Adalbert Volck, many of whose drawings are in the Portrait Gallery's collection. Other articles have discussed works in the collections of the Museum of American Art, the National Portrait Gallery, Cooper-Hewitt Museum, and the Archives of American Art.

In a collaborative Institutional-wide effort, the Museum of American Art joins other bureaus in the continuing analysis of collection information, research and collection management needs, and the data structures that will support access to collections and collection information at the Smithsonian. A working information model has been



developed, and Museum personnel anticipate that a true collection information system will result from this work.

The Museum completed the pilot program for an Inventory of American Sculpture. In 1988, the Museum launched a national program to produce a comprehensive research database of American sculpture from earliest colonial days to the present. Development of this program, which includes a comprehensive inventory and conservation assessment of outdoor sculpture, will continue through 1994. It will result in a major research database, publicly available on-line, which curators nation-wide can use to research and plan exhibitions and publications, to locate related works for computer analysis, or to undertake interdisciplinary research and thematic studies.

### Museum of American History

The study of Old Believer Orthodox Icons now underway in the Division of Community Life is another example of a research program based directly on the collections. This project began with an x-ray fluorescent and microscopic examination of the collection's icons by the curator, conservator, and members of the special advisory committee established to oversee the project. The project has already resulted in an exhibition, brochure, and symposium (May 23, 1988). The SI Press has agreed to publish the research results of the research in 1990.

Other collections-based research programs within the Division of Community Life include: the Hispanic Collections Project (a review of some 3,000 items of ethnographic Hispanica aimed at preparing a guide in 1991-1993); the East European Costume Project (a guide to a 1,000-piece collection); and the Peck and Snyder Sports History Project (a study of a 42-piece sports equipment collection presented to the SI in 1882).

Other collections-based research programs within the Department are broad and far-ranging. The Costume Division, for example, continues to employ items of clothing to explore attitudes toward gender. The results of their research will appear in *Men and Women: Dressing the Part*, a major volume which SI Press should issue in June, 1989. Staff members of the Textile Division are involved in the Patent Model Computerization project, documenting 19th century U.S. "models of invention," while the division of Political History continues to draw important information concerning the imagery and iconography of American political, social, and cultural movements from its collection of campaign artifacts and materials. The supervisor and curator of the Division of Domestic Life are engaged in a study of the work of American silversmiths.

In addition to such scholarly programs aimed at publication, all of the Divisions are involved in collections-based research projects that will result in exhibitions. Not simply a means of introducing the public to the richness of the NMAH collections, these exhibitions have become an alternative means of presenting the results of the most serious scholarship in the field of history and material culture.

A number of collections-related research projects are also underway in the Department of the History of Science and Technology. For example, research on the Museum's collection of artifacts from the firm of William Bond and Son of Boston will result in several scholarly publications as well as an exhibition on the Harvard Collection of Historical Scientific Instruments. The acquisition of a monumental clock, the "Great Historical Clock of America," has produced research on the phenomenon of such clocks



In order to move a 17 ton cable section from the George Washington Bridge from American History's north entrance to the "Material World" exhibit location, 100 feet inside the museum, museum specialist John Stine (suited), along with the Smithsonian's riggers and American History's labor force, levitated the cable section and exhibit platform eight-thousandths of an inch on steel-encased airbags. While technicians monitored the mixing box to maintain 40 lb. per square inch pressure, the team guided the section along a path charted by Institution engineers to take advantage of the building's longitudinal beams and columns and to ensure maximum support for the concentrated load.

By developing the expertise to execute the project in house, Stine and his associates saved the tens of thousands of dollars an outside contractor's services would have cost. This same in-house expertise will be used to move items from the Atomic Energy Hall when American History disassembles that and in late 1989 to move a locomotive from Arts and Industries Building to American History, saving nearly \$100,000 in contractor's fees. (photo by Jeff Tinsley)



and their depiction of the American past. In the area of scientific instruments, a count and analysis of navigation instruments in public and private collections is providing a new understanding of the manufacture and use of these instruments in Colonial and early 19th-century America. The Department's collections of lasers and atomic clocks is the subject of an ongoing study focusing on the role of the military in the development of such instruments.

In the Medical History collections, several video history projects are in progress, including a series of interviews with Dr. Ledley, inventor of the first CAT-scanner, now in the museum collections, and similar interviews with Dr. Leroy Hood, designer of the prototype of the first DNA synthesizer recently acquired by the Museum. An historical symposium will focus on the collections of body-imaging instruments, especially those based on the application of ultra-sound. The Division of Armed Forces History is conducting a variety of collections-based research projects centered on its firearm and uniform collections. An example of the latter is a study of the evolution of the Eisenhower Jacket as a case-study in cultural change and adaptation.

Several other projects are continuing including a study of 19th- and 20th-century cotton gins as an instance of the development of technical skills in the American South, a history of the American railroad freight car, and research on the evolution and social impact of the computer in America.

In the National Numismatic Collection, staff continue to research the following areas for scholarly publication; U.S. coins and medals; U.S. paper money; U.S. coin trials and coin designs; ancient Greek coins; Chinese and Islamic coins; and foreign medals. In the National Philatelic Collection, research is taking place on several recent acquisitions: a 1904-style screen wagon, a turn-of-the-century rural free delivery sled and wagon, a 1931 Ford Model AA mail truck, a 1966 three-wheeled "Westcoaster" mail van, and the first of 99,150 new "Long-Life" postal trucks. Further collecting activities will include the acquisition of postal vehicles such as an 1880s stagecoach, 1920s and 1950s mail trucks, and a 1910 three-wheel mail cycle. These vehicles and the research carried out on them serve as the basis for a comprehensive history of the movement of mail in America. This publication, tentatively entitled, "Mail on the Move," is nearly complete.

#### Museum of Natural History

The more than 118 million specimens of animals, plants, fossils, rocks and minerals, and artifacts of human culture housed by the Museum of Natural History/Museum of Man provide a focal point for the basic research of a resident staff of more than two hundred scientists from the Smithsonian and other affiliated government agencies. Numerous scientists all over the world also use these collections, either as visitors or borrowers. The Museum loans more than two hundred thousand specimens and objects annually to the international scientific community.

In an article in *Science Magazine* in April 1988, a Museum geologist reported that the northeastern edge of the Nile delta is rapidly subsiding, a situation aggravated by rising sea level rise and Aswan Dam's blocking normal sediment flow on the Nile River. The problem could flood a large part of the northern delta plain by the year 2100, inundating agricultural lands where several million people now live. An ongoing multidisciplinary study of the Delta, directed by the Museum in cooperation with the Egyptian government, serves as the basis for these findings. Hundreds of sediment cores,



cut into three to five feet lengths, have been shipped to the Museum for analysis by specialists from scientific and research organizations in Egypt, Western Europe, and North America.

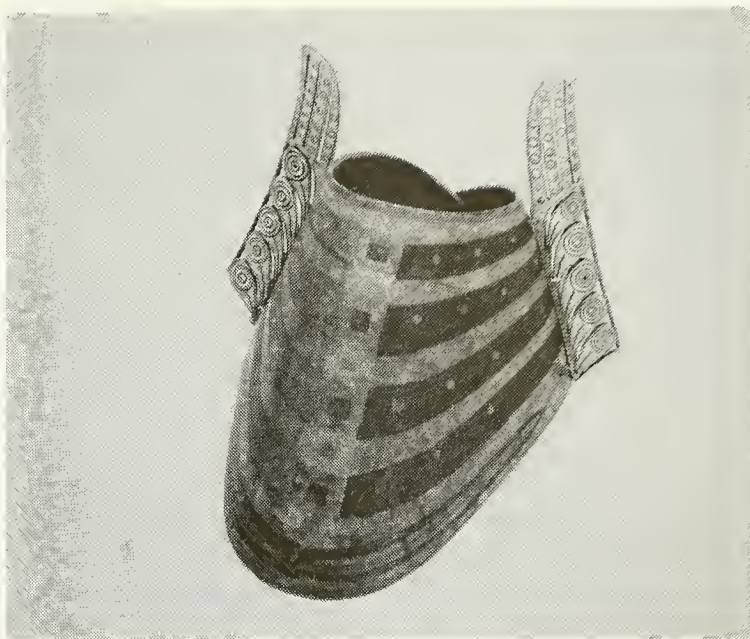
Concern over the high prevalence of cancer in fish living in chemically contaminated bodies of water, and the potential human health hazard this poses, has recently focused attention on the Museum's Registry of Tumors in Lower Animals. The Registry, a depository for a collection of more than five thousand diseased specimens of fish, shellfish, and other animals from the U.S. and forty other countries, is the only clearinghouse in the world for information on the phenomena of cancer in fish and other vertebrate and invertebrate cold-blooded animals.

Information on pathological conditions of special significance in the Museum's incomparable collection of carefully catalogued human skeletal remains was recently computerized under a National Institutes of Health-funded study focusing on the origin of disease. It is expected to provide some answers to questions concerning human adaption and how different disease conditions reflect both biological and cultural components of the past. The skeletal collections, containing more than thirty-five thousand specimens, represents nearly every geographic area of the world, some dating back five thousand years to the early development of cities. It includes the Terry collection of modern skeletons that has been invaluable in the creation of a system that has successfully assisted in identifying large numbers of recently discovered human remains submitted by the FBI and other law enforcement agencies.

Unknown sea life discovered by divers in previously unexplored underwater marine caves in the Bahamas, Bermuda and the Turks and Caicos Islands is being intensively studied by Museum scientists. The diversity of these valuable collections includes, for the crustaceans alone, a new class, a new order, two new families, three new genera, and twenty new species. For scientists these animals and their environment provide a window on the past. Shut off for millions of years from the pressures of natural selection, in a stable environment similar to the deepest parts of the world's oceans, they reproduce more slowly than other shallow marine animals and have lower metabolic rates. Research by Museum scientists and colleagues at several universities has made classification of these animals possible and led to new hypotheses on the distribution of animals via the action of plate tectonics and the use of cryptic habitats on the sea floor.

Museum entomologists are converting a vast compilation of taxonomic and biological data on wasps, bees, ants, and related insects in America north of Mexico into a modern on-line electronic data base by museum entomologists, accomplishing an advance in the field of systematic cataloging. The conversion--expected to be completed by October 1988--will make it possible to revise and expand the database as entomologists identify new species of insects. Easily queried by the outside scientific community, the database contains a wealth of biological information valuable to a wide variety of scientists (for example, parasite-host records for those interested in biological control, and bee-plant associations of value to pollination ecologists and botanists).

The Museum's unparalleled collection of arctic ethnological, archeological, and physical anthropological specimens makes it a center for arctic anthropological research. Current projects include a major study on the prehistory of the Indian and Eskimo cultures of Labrador; research on the first European settlement in the Canadian Arctic in Baffin Island by Martin Frobisher in 1574-76; studies bearing on the prehistory and origins of the Alaskan peoples of St. Lawrence and Kodiak Islands; research on the



Ritual Eskimo hat from Katmai made of thin bent wood decorated with bands, dots, and squares. A stylized animal mouth complete with teeth and tongue appears over the brim. Whiskered ivory ornaments with bird-head cutouts decorate each side (MAE 593-16).

The bottom helmet is part bear and part human, having the ears of each. The tail or fin on the back of the Tlingit battle helmet suggests that it may combine the qualities of or even represent another creature (MAE 2454-17).

Both hats are on loan from the collection of the Leningrad Museum of Anthropology and Ethnology, the principle non-Smithsonian source of Alaskan objects in the "Crossroads of Continents" Exhibit and the oldest anthropological museum in the world, having been founded by Peter the Great.



origins of prehistoric Eskimo art and its ethnographic and modern expressions; and studies of the relationships of Siberian and Alaskan native peoples.

The Museum's mineral research collection is one of the largest and most important in the world. Museum scientists are now using state-of-the-art analytical electron microscopy, powder x-ray diffraction data, and computer graphics to learn more about minerals--the fundamental building blocks of the earth. One ongoing study is shedding light on the structure and formation of economically important oceanic manganese oxide minerals, occurring as nodules, often containing cobalt, nickel, copper, and other strategic metals--metals that the U.S. has a limited supply of and may eventually want to mine.

Museum scientists are in the process of describing as many as 35-40 extinct bird species from a collection of tens of thousands of fossil bird bones amassed in the Hawaiian Islands over the last 12 years. The collection has provided startling evidence that Polynesians who colonized the archipelago 1,500 years ago annihilated as much as 50 per cent of the archipelago's original bird species. Heretofore, most naturalists had assumed that Hawaiian ecosystems were relatively untouched up to the arrival of James Cook in 1778. This continuing project is changing the assumptions of biogeographic studies, making it clear for the first time that modern island biotas are merely remnants of what would have been present under pre-human conditions.

The rich crescent of tropical/subtropical vegetation that extends from the flanks of the Andes northward, then eastward into the Guianas, contains millions of plant and animal species. Investigators have screened very few of these "bioresources" for their economic potential. In 1987-1988 the Museum began a major effort to inventory and study the plants and animals of this region before accelerating human encroachment into Amazonia destroys them. Inventories will continue over the next decade in protected reserves and parks in Bolivia, Peru, Ecuador, Colombia, and Venezuela. Museum staff expect the project to increase understanding of biological diversity and yield hundreds of new plant species, dozens of new animal species, and thousands of new insect species potentially valuable as food, biological control agents, and germplasm resources.

The Museum also has underway two other major long-term collection-based projects aimed at gaining a better knowledge of (and ultimately conserving) the biological diversity of Latin America:

- The Museum is one of six sponsoring organizations that have undertaken a multinational effort to study the biodiversity of the little known plant life of Guyana, Surinam, and French Guiana. Because existing Museum collections document past exploration, they significantly aid this project, involving more than a dozen Museum botanists.

- Ongoing Museum fieldwork is yielding important new information on the composition, function, evolution, and distribution of the plants and animals of Brazil's Amazonian Basin and Atlantic Forests. The Museum coordinates this research with archeological studies of the roots of human culture in Amazonia.

The Museum has begun a major research program to determine whether the present disturbances to terrestrial environments are extraordinary compared with events that took place prior to the origin of humans. Documenting how stable land ecosystems have been



over geological time will help scientists assess and predict the long-term effects of global, environmental disturbances (such as, tropical deforestation and greenhouse effects) now taking place. The Museum enjoys a unique advantage in pursuing this research because of its vast collections of fossil terrestrial animals and plants, the diverse talents of scientists working here, and its importance as a center of research on biological diversity.

### Portrait Gallery

Among the current research projects at the National Portrait Gallery (NPG) are: studies of portraits of significant American lawyers from Colonial times to the present; portraits and biographies of the members of the first United States Congress; American portraits exhibited at the 1893 World's Columbian Exposition; and the history of caricature in America. The Gallery also is identifying and studying various portraits of Andrew Jackson to trace his evolving national image, and the history of Time, Inc.'s patronage of portrait artists. All of these are directed toward major exhibitions scheduled at the NPG within the next four years; each exhibition will be accompanied by a major publication. The research projects listed above include many objects from the NPG collections and, in some cases, will require loans from other public and private collections.

For the Columbus Quincentenary, NPG is collaborating with the Prado in Madrid, Spain and the Kimbell Art Museum in Fort Worth, Texas, to present a major exhibition of portraits from the Golden Age of Spain (the reign of Phillip II). In another collaborative effort, the NPG is undertaking research for the National Gallery of Art (NGA) and writing the entries for the NGA collection of 18- and early 19-century American portraits for a Systematic Catalogue which will reproduce, describe, and discuss each work in the NGA's collections.

Publications are also planned on: the American sitters of the Swedish painter, Anders Zorn; the career of the painter James Earl; the life and work of Charles Fevret de Saint-Memin; patronage of the fine arts in the United States from 1860 to 1920; American museums and art galleries during the early twentieth century; a biography of Sara Hallowell, a leading curator of art exhibitions in the late nineteenth and early twentieth centuries; and the papers of Charles Willson Peale and his family. Yale University Press has already published Volumes 1 and 2 of the *Selected Papers of Charles Willson Peale and His Family*; and volume 3, *Charles Willson Peale: The Artist in Retirement, 1810-1820*, will appear in 1989. Volume 5, *The Autobiography of Charles Willson Peale*, in hardcover and paperback, will mark the 250th anniversary of Peale's birth. Under grants from the Scholarly Research Fund of the SI and the Baltimore Gas and Electric Company, research has begun on a catalogue raisonne of the works of Rembrandt Peale (1778-1860). The book on St. Memin is being edited for publication by the SI Press, with a grant from the Barra Foundation.

### Zoological Park

The Zoo's exhibit departments, animal health department, and research department are responsible for the maintenance of exhibits that deal with the husbandry, management, and exhibition of the exotic animals under their care. Research on the collection also provides input into NZP's extensive programs in public education.

Husbandry and management is critical to the maintenance and breeding of wild animals in captivity. Flamingos have never bred at NZP. They require daily rain showers, mud of a proper consistency to build nests, and a flock of sufficient size to stimulate courtship. In 1988, the Zoo staff installed sprinklers to provide showers, and keepers experimented with mud consistency. A few animals copulated, several built nests, and one laid an (infertile) egg. Observers documented the frequency of courtship display and copulation. Additional flamingos will join the flock in 1989; observers then will note the effect of increased flock size on courtship and copulation. Successful reproduction is the goal.

Another current example of this type of research involves the endangered dorcas gazelle. Animals that the mothers raise are well integrated into the herd and reproduce readily. However they are nervous and flighty around people, and thus are difficult to manage in a zoo. Dorcas infants that humans raise are calm and easy to work with, but do not adjust easily to social life in the herd. In 1988 and 1989 we will measure the effects on tractability and social adjustment of the different rearing techniques. One involves allowing the infant to imprint on its species by staying with the mother for the first two days of life, removing it for three weeks of hand-rearing, and then reintegrating it with the herd. The other involves conditioning the infant to take supplemental bottle feedings from the keepers while the infant remains with the mother and the herd. Long-term observations of these infant's toleration of humans, social and reproduction competence, and susceptibility to illness and injury will inform the choice of the best rearing strategy for this species.

No zoo has ever successfully exhibited the shy North American star-nosed mole. NZP is currently testing the hypothesis that the star functions as an electric detector of prey. Confirmation of this hypothesis will be scientifically stunning and will also generalize to the duck-billed platypus, which also detects its prey electrically and which the NZP is also considering as an exhibit species at NZP.

The Zoo's animal health department is establishing an animal collection of both domestic and nondomestic species to augment ongoing collection-related research with the animal departments at Rock Creek and Front Royal. The animal health department conducts two types of research: 1) applied clinical research to improve the health care of zoological species; and 2) reproductive physiology studies directed at increasing fundamental knowledge, improving reproductive efficiency, enhancing captive propagation and storage, and using of germ plasm for increased biological diversity. In the past, most of this research has occurred at other locations, but with the recent completion of state-of-the-art laboratories and animal holding facilities, at the new Rock Creek Hospital, NZP will conduct many ongoing research projects on-site.

Current projects involving animals for the reproductive physiology studies include: artificial breeding studies of the domestic ferret; oocyte maturation and in vitro fertilization in the domestic cat, leopard cat, and dog; in vitro fertilization, sperm, ova, and embryo cryopreservation in rodents including mice and rats; sperm functionality using hamster ova. All of these projects have applications to understanding or enhancing reproduction in taxonomically-related rare species.



Sometimes neither research nor intervention is of any avail, and scientists must let nature take its course. Zoo herpetologists have waited six years for the dwarf caimans, acquired in 1981, to breed. Last year, one female caiman laid a clutch of ten eggs, and Reptile House personnel removed the eggs from the nest and incubated them. Five caimans, each about a foot long, hatched in the fall of 1987.

The six year wait is attributable to the fact that most crocodilians reach sexual maturity later in life than most other reptiles. On the other hand, crocodilians live to be at least 40 to 50 years old.

Male dwarf caimans have attained record lengths of over five feet; their average adult length is three to four feet. Females are slightly smaller. Dwarf caimans are one of the smallest of all crocodilians and live in the rapidly flowing waters of northern and central South America. Three hatchlings are currently still at NZP, but the Zoo will probably trade some or all of them to another zoo in order to encourage diversity in the gene pool of captive dwarf caimans. (photo by Jessie Cohen)



Current areas of study for applied clinical research which are in collaboration with the Zoo's pathology department include antibiotic pharmacokinetics and anesthetic and surgical techniques in zoological species (including invertebrates). Project results appear in peer-reviewed scientific literature.

The zoological research department maintains an off-exhibit collection of mammals and birds under environmentally controlled conditions as a resource for staff, associate, and student research on behavior, life history, nutrition, physiology, genetics, and husbandry/management. For over 25 years the research collection has been an incomparable resource for intensive laboratory studies of rare and exotic species resulting in many theses and dissertations and literally hundreds of publications and monographs.

The average tenure of a species in the research collection is 4-1/2 years, and a top priority for the management staff during this period is the cataloging of basic life history and management information. The department has produced many management and husbandry related publications and seminars on such exotic species as tarsiers, tenrecs, elephant shrews, Tasmanian devils, water opossums, and bandicoots, to name a few. Current staff research includes studies on the energetics of reproduction in marsupials, hystricognath rodents, and tamarins; nutritional studies of golden lion tamarins and the red panda, a bamboo eating specialist; studies of the growth rate of green iguanas under an enhanced diet regime; studies of growth strategies in precocial, social rodents; and research on behavior and growth in a totally insectivorous primate, the western tarsier.

Collections-based research is now reaching beyond expert exhibitry and successful breeding. The genetic health of captive populations has become a prime concern. Zoo personnel worldwide are drawing blood from captive leopards for analysis in NHP's new Molecular Genetics Laboratory. The results of this study will identify subspecies if they exist, resolve pedigree issues, and establish the amount of inbreeding. Another Zoo goal is the reintroduction of endangered captive-bred species to the wild. The Zoo has figured prominently in a successful effort with golden lion tamarins, and NHP personnel have sharpened their reintroduction techniques by releasing tamarin families on Zoo grounds. These entirely free-ranging groups have populated a living laboratory for reintroduction research, and have delighted and educated Zoo visitors.



Nearly seven times as many Jalak Bali are in captivity in North American zoos as are in the bird's native Bali, where there are only 75. To prevent the extinction of wild Jalak Balis, the Zoo, along with other members of the American Association of Zoological Parks and Aquariums (AAZA), implements a species survival plan AAZA developed for this species. Under this plan, zoos exchange their captive birds, breed newly-paired birds, and renaturalize the offspring in the Indonesian wild. The zoos mate the birds according to computer analysis based upon the registry of all captive Jalak Balis. This analysis ensures that captive breeding strengthens the gene pool. This analysis relies upon computer methods Zoo personnel evolved while working with the international Golden-Lion Tamarin Conservation Program for which the Zoo is principal breeder and administrator. (photo by Jessie Cohen)





## APPENDIX II: DEFINITION OF PROGRAM CATEGORIES

The following list defines each program category used in the Prospectus. The Office of Financial Analysis and Planning, working with the bureaus, uses these program categories to estimate expenditures included in the Institution's base budgets for FY 1987. The Office of Planning and Budget added incremental amounts for budgeted or projected increases in subsequent years based on the appropriate program category as identified by the bureau in the FY 1990 Budget Call.

## PROGRAM CATEGORIES

RESEARCH/CURATION & DIRECT SUPPORT pertains to research and curatorial activities, including, but not limited to, research centers, museum departmental activity, and animal management at the National Zoological Park.

Researchers/Curators ("Faculty") - pertains to research/curatorial staff only and their compensation.

Direct Support - pertains to departmental museum technicians, research assistants, secretaries, clerk-typist and their salaries, plus all departmental other object class expenditures.

SPECIALIZED RESEARCH/CURATION SUPPORT ACTIVITIES - includes operations such as:

Archives Offices, including SI Archives, Archives of American Art and bureau archival activity.

Registrarial Operations, including the Office of the Registrar and bureau registrarial activity.

Conservation Labs, including Conservation Analytical Laboratory and bureau conservation activity.

Special Inventory Efforts also includes base inventory efforts where they are identified by the bureau.

Collection Centers, including Smithsonian Oceanographic Sorting Center and Museum Support Center equipment.

Collections Acquisitions

Libraries, including SI Libraries and bureau library activity.

Miscellaneous Research Support Activities, including SERC instrumentation, the Museum of Natural History's Scanning Electron Microscope lab and Molecular Systematics lab, Link Port Marine Station, and research support at the Museum of American Art and the Astrophysical Observatory.

TECHNICAL SUPPORT-MULTIPURPOSE which includes:

Photographic Offices, including Office of Printing and Photographic Services (OPPS) and bureau photographic departments.

ADP Offices, including Office of Information Resource Management (OIRM) and bureau ADP departments.

## PROGRAM CATEGORIES (CONTINUED)

EXHIBITIONS, in addition to various bureau departments, will include the Office of Exhibits Central, the Traveling Exhibition Service, Folklife Programs, and certain activities of the International Center.

EDUCATION AND RELATED ACTIVITIES, including the various education, public affairs and other information activities of the Smithsonian, as well as the performing arts activities of the NMAH, the audio-visual branch of OPlantS and the Institution's auxiliary activities.

SECURITY, including the Office of Protection Services and bureau security offices at the Tropical Research Institute, the Environmental Research Center and the National Zoological Park.

BUILDINGS MAINTENANCE & PLANT SERVICES, including the Office of Plant Services, the Office of Design and Construction, MSC operations and buildings and grounds management in the bureaus.

SAFETY including the Office of Environmental Management and Safety and safety components of the National Zoological Park and OPlantS.

ADMINISTRATIVE & MISCELLANEOUS EXPENSES, including the central administrative units (except OIRM and OPDS) and expenses at the level of the director/assistant directors' offices for all units with 50 or more employees. The director's office for the Anacostia Neighborhood Museum is also included due to the Museum's multipurpose organizational breakdown of activities. Department Chairmen's offices will be included with other department expenses under "Research/Curation and Direct Support."





### APPENDIX III: PROJECTED TOTAL RESOURCES, BY BUREAU, BY PROGRAM CATEGORY

This appendix displays the overall projected resources for each bureau, by program category. In each case the totals contain the FY 1990 Federal budget request submitted to Congress, plus the approved Federal and Trust projections as presented to the Board of Regents in September, 1988 for approval or revision for this document. In the case of certain nonappropriated funds, adjustments were made at the Institutional level for fiscal years 1991 through 1994. In such cases, the sum of the individual bureau projections will not equal the Institution-wide projections contained in the body of the *Prospectus*.





ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Asst. Secretary for Research

PROGRAM CATEGORY	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL
RESEARCH/CURATION & DIRECT SUP	14	1586	14	1754	14	1884	14	1897	14	1908	14	1901
SPECIALIZED RESEARCH/CURATION	0	0	0	0	1	110	1	130	1	130	1	150
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	14	545	14	632	14	648	14	649	14	650	14	664
TOTAL	28	2131	28	2386	29	2642	29	2676	29	2688	29	2715

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Joseph Henry Papers

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	5	227	5	219	6	264	8	324	8	324	8	324
SPECIALIZED RESEARCH/CURATION	0	0	0	0	1	50	1	50	1	50	1	50
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	10	0	18	1	45	2	65	2	85
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	9	0	9	0	9	0	9	0	9
TOTAL	5	227	5	238	7	341	10	428	11	448	11	468

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Astrophysical Observatory

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	201	28294	203	39534	210	35364	213	31676	215	32026	197	33399
SPECIALIZED RESEARCH/CURATION	25	1770	25	1768	25	1765	25	1778	25	1763	25	1763
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	4	235	4	255	4	277	4	287	4	292	4	300
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	14	683	14	683	14	683	14	683	14	683	14	683
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	78	4923	80	6282	85	6460	85	6658	85	6849	85	7062
TOTAL	322	35905	326	48522	338	44549	341	41082	343	41613	325	43207

Less SAO Overhead Recovery                      -3,062                      -3,850                      -3,925                      -4,000                      -4,100                      -4,200



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Tropical Research Institute

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	51	3740	52	3775	63	4349	63	4004	54	3694	54	3694
SPECIALIZED RESEARCH/CURATION	0	0	0	-276	13	1133	13	402	13	402	13	402
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	3	124	3	124	5	188	6	403	3	129	3	130
SECURITY	14	374	14	385	14	385	14	385	14	385	14	385
BUILDING MAINT. & PLANT SERV	34	1048	34	1048	34	1048	34	1048	34	1048	34	1046
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	35	2018	36	1880	36	2082	36	1887	36	1939	36	1830
TOTAL	137	7304	139	6936	165	9185	166	8129	154	7597	154	7487

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Environmental Research Center

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	9	858	11	919	14	1128	10	1278	18	1629	20	1378
SPECIALIZED RESEARCH/CURATION	0	0	0	0	1	23	1	23	1	23	1	23
TECHNICAL SUPPORT MULTIPURPOSE	7	241	7	241	7	241	7	241	7	241	7	241
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	2	65	2	65	2	65	2	65	2	65	2	56
SECURITY	1	16	1	16	1	16	1	16	1	16	1	16
BUILDING MAINT. & PLANT SERV	9	376	9	376	12	455	12	456	12	458	12	459
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	5	290	5	327	5	327	5	329	5	329	5	329
TOTAL	33	1846	35	1944	42	2255	46	2408	46	2761	48	2502

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Zoological Park

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	150	7235	151	7666	174	9426	188	9517	193	9583	193	9628
SPECIALIZED RESEARCH/CURATION	0	0	0	14	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	6	284	6	284	6	284	6	284	6	284	6	284
EDUCATION & RELATED ACTIVITIES	10	340	10	340	10	340	10	340	10	340	10	340
SECURITY	22	629	22	629	22	629	22	629	22	629	22	629
BUILDING MAINT. & PLANT SERV	142	5651	142	5646	142	5646	142	6646	142	8666	142	5666
SAFETY	4	213	4	213	4	213	4	213	4	213	4	213
ADMINISTRA. & MISC. EXPENSES	14	806	16	1365	16	1374	16	1379	16	1383	16	1379
TOTAL	348	15158	351	16157	374	17912	388	19008	393	21098	393	18139



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Institution Archives

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP		0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	21	815	21	815	25	1010	26	1046	23	921	24	947
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	21	0	21	0	21	0	21	0	21
TOTAL	21	815	21	836	25	1031	26	1067	23	942	24	968

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Institution Libraries

PROGRAM CATEGORY	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	98	4940	100	5003	101	5738	101	5970	101	6239	101	6549
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	13	613	13	755	13	755	13	755	13	755	13	754
TOTAL	111	5553	113	5758	114	6493	114	6725	114	6994	114	7303

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Major Scientific Instrumentation

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	1206	0	2176	0	5932	0	6940	0	7327	0	7327
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	1206	0	2176	0	5932	0	6940	0	7327	0	7327



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Asst. Secretary for Museums

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	500	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	10	751	10	803	10	909	10	934	10	959	10	959
TOTAL	10	1251	10	803	10	909	10	934	10	959	10	959

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Office of Museum Programs

PROGRAM CATEGORY	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	13	594	12	498	15	820	15	746	15	682	15	676
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	16	0	17	0	18	0	18	0	18
TOTAL	13	594	12	514	15	837	15	764	15	700	15	694

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Office of the Registrar

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	3	146	3	146	3	146	3	146	4	211	4	211
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTR. & MISC. EXPENSES	0	0	0	5	0	5	0	5	0	5	0	5
TOTAL	3	146	3	151	3	151	3	151	4	216	4	216



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Museum of Natural History

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	352	18688	362	19139	371	20402	364	20930	392	21402	398	21649
SPECIALIZED RESEARCH/CURATION	86	3618	86	3667	92	4195	94	4070	93	3919	92	3923
TECHNICAL SUPPORT MULTIPURPOSE	22	1428	22	1428	24	1543	25	1564	25	1564	25	1564
EXHIBITIONS	46	4433	46	4059	48	5254	46	4640	46	4527	46	4978
EDUCATION & RELATED ACTIVITIES	17	624	17	619	18	709	16	709	18	709	18	707
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	66	1456	66	1456	66	1456	66	1456	66	1456	66	1456
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	23	2282	30	3395	30	3508	30	3588	30	3921	30	3604
TOTAL	612	32529	629	33763	649	37067	663	36957	670	37498	675	37881

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Air and Space Museum

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	50	2903	49	2723	56	3116	58	3031	58	3030	58	3009
SPECIALIZED RESEARCH/CURATION	34	1637	34	1627	34	1633	34	1638	34	1642	34	1651
TECHNICAL SUPPORT MULTIPURPOSE	0	265	0	265	0	265	0	265	0	265	0	265
EXHIBITIONS	62	5049	62	4628	62	4523	62	4606	61	4735	61	4712
EDUCATION & RELATED ACTIVITIES	13	704	13	706	15	904	15	874	15	875	15	874
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	75	2278	75	2278	75	2278	75	2278	75	2278	75	2278
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	36	2395	37	2870	37	2913	37	2962	37	3009	37	3062
TOTAL	270	15231	270	15097	279	15632	281	15654	280	15834	280	15851

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Museum of American History

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	126	7195	127	6971	130	6410	130	6495	130	6731	130	7062
SPECIALIZED RESEARCH/CURATION	69	2969	68	3389	72	3911	72	3803	72	3824	72	3846
TECHNICAL SUPPORT MULTIPURPOSE	5	346	5	346	5	346	5	346	5	346	5	346
EXHIBITIONS	54	3133	54	2989	56	3909	56	3903	56	3153	52	2774
EDUCATION & RELATED ACTIVITIES	25	1239	25	1219	25	1215	25	1209	25	1203	25	1203
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	50	1332	50	1327	50	1327	50	1328	50	1328	50	1322
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	22	1795	23	2153	23	2105	23	2117	22	2128	20	2142
TOTAL	351	18009	352	18394	361	19223	361	19201	360	18713	354	18695



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Museum of American Art

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	33	1872	35	1896	39	2052	39	2053	40	2092	40	2091
SPECIALIZED RESEARCH/CURATION	37	2403	37	2155	37	1980	37	1913	37	1893	37	1873
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	13	667	13	856	14	623	14	623	13	573	13	573
EDUCATION & RELATED ACTIVITIES	11	504	11	502	12	542	12	542	12	542	12	542
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	17	543	17	543	18	560	18	557	19	575	19	576
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	12	637	12	818	12	819	12	823	12	827	12	831
TOTAL	123	6626	125	6770	132	6576	132	6511	133	6502	133	6486

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Portrait Gallery

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	24	1106	24	1101	24	1094	24	1095	24	1095	24	1092
SPECIALIZED RESEARCH/CURATION	15	958	15	976	15	956	15	953	15	953	15	953
TECHNICAL SUPPORT MULTIPURPOSE	3	147	3	147	3	147	3	147	3	147	3	147
EXHIBITIONS	14	1275	14	1351	16	1136	16	1275	16	1173	16	1159
EDUCATION & RELATED ACTIVITIES	8	211	9	261	10	281	10	281	10	281	10	281
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	16	523	16	523	17	540	17	540	17	540	17	540
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	7	491	7	629	7	639	7	640	7	640	7	663
TOTAL	87	4711	88	4988	92	4793	92	4931	92	4829	92	4835

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Hirshhorn Museum + Sculpture Garden

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	11	987	11	963	11	941	11	919	11	899	11	881
SPECIALIZED RESEARCH/CURATION	19	1610	19	1725	19	1862	19	1909	19	1901	19	1944
TECHNICAL SUPPORT MULTIPURPOSE	3	104	3	104	3	104	3	104	3	104	3	104
EXHIBITIONS	7	383	7	301	7	481	7	381	7	301	7	301
EDUCATION & RELATED ACTIVITIES	6	332	6	332	6	332	6	332	6	332	6	332
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	23	608	23	608	23	608	23	608	23	608	23	608
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	9	624	9	731	9	740	9	746	9	746	9	746
TOTAL	78	4648	78	4764	78	5068	78	4999	78	4891	78	4916



Arthur M. Sackler Gallery / Freer Gallery of Art

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ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Archives of American Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	\$ 000	FT	EMPL	\$ 000	FT	EMPL	\$ 000	FT	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	2	0	2	0	2	0	2	0	2	0	2
SPECIALIZED RESEARCH/CURATION	32	1999	32	2009	41	2249	42	2361	43	2405	44	2446
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	21	0	61	0	61	0	61	0	61	0	61
TOTAL	32	2022	32	2072	41	2312	42	2424	43	2468	44	2509

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Cooper-Hewitt Museum

PROGRAM CATEGORY	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL
RESEARCH/CURATION & DIRECT SUP	6	418	6	332	7	367	7	368	7	367	7	367
SPECIALIZED RESEARCH/CURATION	13	443	13	443	14	463	11	463	14	463	14	463
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	30	0	30	0	30	0	30
EXHIBITIONS	6	1151	5	2897	5	392	5	367	5	367	5	352
EDUCATION & RELATED ACTIVITIES	11	1037	11	1063	12	1140	12	1164	12	1191	12	1187
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	11	499	11	499	11	599	11	649	11	649	11	699
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTR. & MISC. EXPENSES	12	782	12	897	12	897	12	897	12	897	12	897
TOTAL	59	4330	58	6131	61	3888	61	3938	61	3964	61	3995



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Museum of African Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	10	472	10	472	10	472	10	472	10	472	10	472
SPECIALIZED RESEARCH/CURATION	11	488	11	488	11	608	11	658	11	658	11	758
TECHNICAL SUPPORT MULTIPURPOSE	2	156	2	156	2	156	2	156	2	156	2	156
EXHIBITIONS	17	1724	17	1724	17	1724	17	1724	17	1724	17	1724
EDUCATION & RELATED ACTIVITIES	10	396	10	388	11	420	11	419	11	419	11	419
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	11	680	12	636	9	686	9	692	9	702	9	602
TOTAL	61	3916	62	3864	60	4066	60	4121	60	4131	60	4131

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Anacostia Museum

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	7	292	7	292	8	416	8	466	8	466	8	516
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	7	382	7	382	9	432	10	468	10	468	10	468
EDUCATION & RELATED ACTIVITIES	3	133	3	133	3	133	3	133	3	133	3	133
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	1	42	1	42	1	42	1	42	1	42	1	42
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	3	205	4	248	7	351	7	351	7	351	7	351
TOTAL	21	1054	22	1097	28	1374	29	1460	29	1460	29	1510

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Conservation Analytical Laboratory

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	29	1643	30	1670	30	1670	30	1670	30	1670	30	1670
SPECIALIZED RESEARCH/CURATION	4	277	4	277	4	277	4	277	4	277	4	277
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	8	659	8	666	8	666	8	666	8	666	8	666
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	1	47	0	65	0	65	0	65	0	65	0	65
TOTAL	42	2626	42	2678	42	2678	42	2678	42	2678	42	2678



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Office of Exhibits Central

PROGRAM CATEGORY	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0
EXHIBITIONS	46	2052	46	2052	54	2290
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	63	63	63	63
TOTAL	46	2052	46	2115	54	2353

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Inst. Traveling Exhibition Service

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	46	4256	43	4526	49	4873	46	4625	48	4550	50	4609
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	20	0	20	0	20	0	20	0	20
TOTAL	46	4256	43	4546	49	4893	46	4645	48	4570	50	4629

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Asst. Secretary for Public Service

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	7	0	7	0	7	0	7	0
EDUCATION & RELATED ACTIVITIES	2	217	4	328	4	337	4	337	4	337	4	337
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	7	420	8	520	10	574	10	574	10	574	10	574
TOTAL	9	637	12	855	14	918	14	918	14	918	14	918



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Telecommunications													
	1989		1990		1991		1992		1993		1994		
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	
PROGRAM CATEGORY													
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	14	901	14	903	15	964	15	978	15	999	15	1004	
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	9	0	9	0	9	0	9	0	9	9
TOTAL	14	901	14	912	15	973	15	987	15	1008	15	1013	

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Visitors Info. + Assoc. Reception Ctr.

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY		FY		FY		FY		FY		FY	
	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000
	EMPL		EMPL		EMPL		EMPL		EMPL		EMPL	
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	2	65	2	65	2	65	2	65	2	65
EDUCATION & RELATED ACTIVITIES	26	1412	26	1279	30	1439	30	1449	30	1459	30	1469
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	10	0	13	0	13	0	13	0	13	0	13
TOTAL	26	1422	28	1357	32	1517	32	1527	32	1537	32	1547

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Public Affairs

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	17	1291	17	1311	19	1357	19	1357	19	1357	19	1357
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRATIVE & MISC. EXPENSES	0	0	0	20	0	20	0	20	0	20	0	20
TOTAL	17	1291	17	1331	19	1377	19	1377	19	1377	19	1377



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Institution Press

PROGRAM CATEGORY	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT		FT		FT		FT		FT		FT	
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	62	15829	62	20263	65	22407	66	23124	66	23574	66	23764
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	7	466	7	513	7	513	7	513	7	513	7	513
TOTAL	69	16295	69	20776	72	22920	73	23637	73	24087	73	24277

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

INTERNATIONAL ACTIVITIES

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	2	209	2	209	2	209	2	209	2	209	2	209
SPECIALIZED RESEARCH/CURATION	0	19	0	44	4	224	6	296	6	296	6	296
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	272	0	272	0	372	0	422	0	422	0	472
EDUCATION & RELATED ACTIVITIES	9	784	10	747	17	972	17	972	17	972	17	972
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	6	467	7	512	7	512	7	512	7	512	7	512
TOTAL	17	1751	19	1784	30	2289	32	2411	32	2411	32	2461

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

American Studies + Folklife Programs

PROGRAM CATEGORY	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000
RESEARCH/CURATION & DIRECT SUP	8	710	8	710	9	738	9	738	9	738	9	738
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	14	3488	14	6225	18	4510	18	5023	17	6158	16	3265
EDUCATION & RELATED ACTIVITIES	2	123	2	124	2	125	2	126	2	127	2	128
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	1	1	30	1	30	1	30	1	30	1	30
TOTAL	24	4322	25	7089	30	5403	30	5917	29	7053	28	4161



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Int'l Environmental Science Program													
PROGRAM CATEGORY	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994	
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	
	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	
RESEARCH/CURATION & DIRECT SUP	13	770	13	770	15	870	15	870	15	870	15	870	
SPECIALIZED RESEARCH/CURATION	0	0	0	0	1	115	1	115	1	115	1	115	
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0	
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0	
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0	
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0	
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0	
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0	
ADMINISTRA. & MISC. EXPENSES	0	0	0	11	0	11	0	11	0	11	0	11	
TOTAL	13	770	13	781	16	996	16	996	16	996	16	996	

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Office of Fellowships + Grants

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	13	2414	13	2513	13	2822	13	3498	13	3722	13	3978
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	30	0	30	0	30	0	30	0	30	0	30
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	2	0	14	0	14	0	14	0	14	0	14
TOTAL	13	2446	13	2557	13	2866	13	3542	13	3766	13	4022

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Ofc. Interdisciplinary Studies

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY		FY		FY		FY		FY		FY	
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000
RESEARCH/CURATION & DIRECT SUP	0		0		0		0		0		0	
SPECIALIZED RESEARCH/CURATION	0		0		0		0		0		0	
TECHNICAL SUPPORT MULTIPURPOSE	0		0		0		0		0		0	
EXHIBITIONS	0		1		1		1		1		1	
EDUCATION & RELATED ACTIVITIES	5	383	6	486	6	743	5	466	5	494	5	466
SECURITY	0		0		0		0		0		0	
BUILDING MAINT. & PLANT SERV	0		0		0		0		0		0	
SAFETY	0		0		0		0		0		0	
ADMINISTRA. & MISC. EXPENSES	0		0		0		0		0		0	
TOTAL	5	383	7	557	7	814	6	537	6	565	6	537



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Elementary and Secondary Education

	FY ---	1989 ---	FY ---	1990 ---	FY ---	1991 ---	FY ---	1992 ---	FY ---	1993 ---	FY ---	1994 ---
	FT	\$ 000	EMPL	FT	\$ 000	EMPL	FT	\$ 000	EMPL	FT	\$ 000	EMPL
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	10	627	11	683	12	773	12	766	12	768	12	770
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	12	0	12	0	12	0	12	0	12
TOTAL	10	627	11	695	12	785	12	778	12	780	12	782

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

National Science Resources Center

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	7	429	7	429	10	655	10	665	10	675	10	685
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	15	0	15	0	15	0	15	0	15
TOTAL	7	429	7	444	10	670	10	680	10	690	10	700

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Regents' Fellowships + Publication Funds

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	180	0	180	0	260	0	290	0	300		310
TOTAL	0	180	0	180	0	260	0	290	0	300		310



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

CARE, Res., Opport., Smithsonian Awards

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	2950	0	3127	0	3430	0	4000	0	4250		4300
SPECIALIZED RESEARCH/CURATION	0	1750	0	1880	0	1950	0	2050	0	2150		2205
EDUCATION & RELATED ACTIVITIES	0	550	0	550	0	550	0	550	0	550		550
ADMINISTRA. & MISC. EXPENSES	0	370	0	370	0	390	0	425	0	440		475
TOTAL	0	5620	0	5927	0	6320	0	7025	0	7390		7530

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Special Exhibition Fund

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EXHIBITIONS	0	3220	0	3520	0	3620	0	3720	0	3820	.	3920
TOTAL	0	3220	0	3520	0	3620	0	3720	0	3820	.	3920

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Museum Support Center

	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	4	353	4	353	4	1053	2	940	-2	57	-2	57
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	37	1008	37	1008	40	1325	41	1342	43	1175	45	1265
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	1	72	1	72	1	72	1	72	1	72
TOTAL	41	1361	42	1433	45	2450	40	2354	42	1304	44	1394



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

MSC - Equipment

PROGRAM CATEGORY	1989		1990		1991		1992		1993		1994	
	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT	FY	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	3058	0	3058	0	8000	0	8000	0	8000	0	8000
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	3058	0	3058	0	8000	0	8000	0	8000	0	8000

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Assistant Secretary for External Affairs

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	5	300	13	746	13	770	13	795	13	795	13	795
TOTAL	5	300	13	746	13	770	13	795	13	795	13	795

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Office of Membership + Development

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL	FT	EMPL
		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000		\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	0	0	0	0	0	0	0	0	0	0	0	0
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	20	1077	35	1678	40	1843	43	1952	47	2088	47	2090
TOTAL	20	1077	35	1678	40	1843	43	1952	47	2088	47	2090



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Smithsonian Magazine

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EDUCATION & RELATED ACTIVITIES	94	61135	94	68160	96	70640	97	73050	98	75530	100	79090
TOTAL	94	61135	94	68160	96	70640	97	73050	98	75530	100	79090

ALL FUNDS  
OPERATING EXPENSES  
8Y PROGRAM CATEGORY

National Associates Program

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EDUCATION & RELATED ACTIVITIES	40	18907	41	21650	43	23335	45	25266	45	27925	47	30879
ADMINISTRA. & MISC. EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	40	18907	41	21650	43	23335	45	25266	45	27925	47	30879

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Resident Associates Program

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EDUCATION & RELATED ACTIVITIES	56	4810	56	5215	57	5220	58	5410	59	5620	60	5845
TOTAL	56	4810	56	5215	57	5220	58	5410	59	5620	60	5845

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Air + Space Magazine

	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
	FT	FT	FT	FT	FT	FT
	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL
	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000	\$ 000
PROGRAM CATEGORY						
EDUCATION & RELATED ACTIVITIES	27	8525	27	8500	28	9160
TOTAL	27	8525	27	8500	28	9160



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Business Management Office

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EDUCATION & RELATED ACTIVITIES	3	310	3	270	3	285	3	300	3	310	3	330
TOTAL	3	310	3	270	3	285	3	300	3	310	3	330

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Product Development													
	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994	
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	
PROGRAM CATEGORY													
EDUCATION & RELATED ACTIVITIES	5	675	6	760	6	790	6	815	6	840	6	885	
TOTAL	5	675	6	760	6	790	6	815	6	840	6	885	

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Museum Shops													
	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994	
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	
PROGRAM CATEGORY													
EDUCATION & RELATED ACTIVITIES	227	22835	240	27205	245	28820	250	30320	255	32800	260	34420	
TOTAL	227	22835	240	27205	245	28820	250	30320	255	32800	260	34420	

ALL FUNDS  
OPERATING EXPENSES  
8Y PROGRAM CATEGORY

Mail Order

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
EDUCATION & RELATED ACTIVITIES	86	19925	95	22155	106	23165	116	24500	128	25890	128	27359
TOTAL	86	19925	95	22155	106	23165	116	24500	128	25890	128	27359



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

Concessions													
	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994	
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	
PROGRAM CATEGORY													
EDUCATION & RELATED ACTIVITIES	2	2202	2	2900	2	2990	2	3080	2	3175	2	3265	
TOTAL	2	2202	2	2900	2	2990	2	3080	2	3175	2	3265	

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

CENTRAL MANAGEMENT OFFICES-SUMMARY

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	4	206	4	208	4	210	4	212	4	214	4	216
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	15	0	15	0	15	0	15
EXHIBITIONS	0	0	0	0	0	0	0	0	0	0	0	0
EDUCATION & RELATED ACTIVITIES	0	0	0	0	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	0	0	0	0	0	0	0	0	0	0	0
SAFETY	0	0	0	0	0	0	0	0	0	0	0	0
ADMINISTRA. & MISC. EXPENSES	55	4396	59	4589	63	4780	63	4762	63	4763	63	4749
TOTAL	59	4602	63	4797	67	5005	67	4989	67	4992	67	4980

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

SPECIALIZED ADMIN + TECH OFFICES-SUMMARY

PROGRAM CATEGORY	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	\$ 000	EMPL	\$ 000	EMPL	\$ 000	FT	\$ 000	EMPL	\$ 000	FT	\$ 000
RESEARCH/CURATION & DIRECT SUP	5	179	15	635	15	637	15	629	15	629	15	629
SPECIALIZED RESEARCH/CURATION	1	76	1	82	3	136	3	136	3	136	3	136
TECHNICAL SUPPORT MULTIPURPOSE	119	7779	120	7718	139	8879	139	8646	142	8603	142	8607
EXHIBITIONS	0	0	0	15	0	30	0	30	0	30	0	30
EDUCATION & RELATED ACTIVITIES	0	0	0	2	0	0	0	0	0	0	0	0
SECURITY	0	0	0	0	0	0	0	0	0	0	0	0
BUILDING MAINT. & PLANT SERV	0	590	0	590	0	679	0	723	0	775	0	831
SAFETY	28	1599	28	1599	34	1943	35	1995	35	2000	35	2005
ADMINISTRA. & MISC. EXPENSES	328	18947	360	22455	375	22984	378	23413	381	23622	384	23820
TOTAL	481	29170	524	33096	566	35288	570	35572	576	35795	579	36058

Less SI Admin. Overhead Recovery -10,980 -12,120 -12,750 -12,850 -13,000 -13,250

ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

FACILITIES SERVICES

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000	EMPL	\$ 000
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	5	200	5	200	5	200	5	200	5	200	5	200
SPECIALIZED RESEARCH/CURATION	0	0	0	0	0	0	0	0	0	0	0	0
TECHNICAL SUPPORT MULTIPURPOSE	0	0	0	0	0	0	0	0	0	0	0	0
EXHIBITIONS	2	75	2	75	2	75	2	75	2	75	2	75
EDUCATION & RELATED ACTIVITIES	2	92	2	92	2	92	2	92	2	92	2	92
SECURITY	734	19856	734	19856	759	20549	774	20902	789	21255	804	21608
BUILDING MAINT. & PLANT SERV	532	40580	538	44695	574	48373	581	49980	596	52027	601	53756
SAFETY	1	52	1	52	1	52	1	52	1	52	1	52
ADMINISTRA. & MISC. EXPENSES	31	1820	42	5236	42	5283	42	5038	42	5038	41	5538
TOTAL	1307	62675	1324	70206	1385	74624	1407	76339	1437	78739	1456	81321



ALL FUNDS  
OPERATING EXPENSES  
BY PROGRAM CATEGORY

INSTITUTIONAL TOTAL

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000	FT	\$ 000
EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL	EMPL
PROGRAM CATEGORY												
RESEARCH/CURATION & DIRECT SUP	1140	87022	1169	100696	1243	106455	1277	109818	1284	111373	1279	115464
SPECIALIZED RESEARCH/CURATION	487	30662	488	30895	536	40964	530	40504	534	39805	535	40385
TECHNICAL SUPPORT MULTIPURPOSE	163	10619	164	10558	185	11879	180	11667	189	11624	189	11628
EXHIBITIONS	353	33117	352	37568	377	41882	370	41840	374	41064	371	40398
EDUCATION & RELATED ACTIVITIES	848	170155	877	191708	933	203421	900	212765	976	223050	988	234165
SECURITY	771	20875	771	20886	796	21579	811	21932	826	22285	841	22638
BUILDING MAINT. & PLANT SERV	1035	57431	1041	61536	1085	65833	1093	68550	1111	72522	1118	71441
SAFETY	33	1864	33	1864	39	2208	40	2260	40	2265	40	2270
ADMINISTRA. & MISC. EXPENSES	798	51269	887	65369	921	84172	930	95327	937	104938	938	117027
TOTAL	5628	463014	5782	521080	6115	578393	6209	604663	6271	628926	6299	655416

#### APPENDIX IV: PROJECTED USES OF FUNDS BY BUREAU, BY FUND SOURCE

This appendix presents the projected resources for each bureau and office, by source of funds. The various administrative, financial, and support organizations of the Institution are grouped into three categories: (1) Central Management Offices; (2) Specialized Administrative and Technical Offices; and (3) Facilities Services. In each case the projections are consistent with the FY 1990 Federal budget request submitted to Congress, and with the Institution's FY 1990 Trust budget estimates as submitted to the Board of Regents in September, 1988. However, in the case of certain nonappropriated funds, adjustments were made at the Institutional level for FY 1991 through 1994. In such cases, the sum of the individual bureau projections will not equal the Institution-wide projections contained in the body of the *Prospectus*. All projections are subject to further refinement depending on Institutional success in future years in revenue producing and fund raising efforts, in obtaining grants and contracts, and in gaining Congressional approval for funds through the appropriation process.



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Asst. Secretary for Research

	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1995	1996	1997
EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)
FEDERAL SALARY & EXPENSES	24	986	24	1014	25	1124	25	1144	25
UNRESTRICTED & SPECIAL PURPOSE FUNDS	2	366	2	654	2	776	2	776	2
RESTRICTED FUNDS	0	476	0	475	0	487	0	489	0
GOVERNMENT GRANTS & CONTRACTS	2	303	2	243	2	255	2	267	2
GRAND TOTAL - ALL FUNDS	28	2131	28	2386	29	2642	29	2676	29

Joseph Henry Papers

	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1995	1996	1997
EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)
FEDERAL SALARY & EXPENSES	5	219	5	228	7	331	8	358	9
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	1	0	0	0	0	0	0	0
RESTRICTED FUNDS	0	7	0	10	0	10	2	70	2
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	5	227	5	238	7	341	10	428	11

Smithsonian Astrophysical Observatory

	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1995	1996	1997
EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)	EMP \$ (000)
FEDERAL SALARY & EXPENSES	107	10721	111	11172	125	11907	136	12375	140
UNRESTRICTED & SPECIAL PURPOSE FUNDS	96	7154	97	8320	102	8439	102	8835	102
RESTRICTED FUNDS	0	30	0	30	0	30	0	43	0
GOVERNMENT GRANTS & CONTRACTS	119	10000	118	29000	111	24093	103	19829	101
GRAND TOTAL - ALL FUNDS	322	35905	326	48522	338	44549	341	41082	343

\* Less SAO Overhead Recovery

-3,062 -3,850 -3,925 -4,000 -4,100 -4,200



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Smithsonian Tropical Research Institute

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)	
FEDERAL SALARY & EXPENSES	125	5738	127	5664	153	7688	154	7122	151	6848	151	6848
UNRESTRICTED & SPECIAL PURPOSE FUNDS	3	544	3	560	3	567	3	572	3	574	3	464
RESTRICTED FUNDS	0	444	0	125	0	325	0	125	0	175	0	175
GOVERNMENT GRANTS & CONTRACTS	9	578	9	587	9	605	9	310	0	0	0	0
GRAND TOTAL - ALL FUNDS	137	7304	139	6936	165	9185	166	8129	154	7597	154	7487

Environmental Research Center

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)	
FEDERAL SALARY & EXPENSES	29	1418	31	1532	38	1850	42	2001	42	2003	44	2104
UNRESTRICTED & SPECIAL PURPOSE FUNDS	2	205	2	205	2	205	2	207	2	207	2	198
RESTRICTED FUNDS	0	10	0	7	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	2	213	2	200	2	200	2	200	2	551	2	200
GRAND TOTAL - ALL FUNDS	33	1846	35	1944	42	2255	46	2408	46	2761	48	2502

National Zoological Park

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)	
FEDERAL SALARY & EXPENSES	343	14048	346	14638	369	16334	378	16539	383	16698	388	16894
UNRESTRICTED & SPECIAL PURPOSE FUNDS	4	515	4	748	4	805	4	1807	4	3820	4	681
RESTRICTED FUNDS	1	461	1	568	1	550	1	555	1	551	1	535
GOVERNMENT GRANTS & CONTRACTS	0	134	0	203	0	215	0	107	0	29	0	29
GRAND TOTAL - ALL FUNDS	348	15158	351	16157	374	17912	383	19008	388	21098	393	18139

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Smithsonian Institution Archives

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	15	600	15	621	19	816	20	852	21	869	22	895
UNRESTRICTED & SPECIAL PURPOSE FUNDS	6	215	6	215	6	215	6	215	2	73	2	73
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	21	815	21	836	25	1031	26	1067	23	942	24	968

Smithsonian Institution Libraries

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	101	5161	102	5338	104	6073	104	6305	104	6574	104	6884
UNRESTRICTED & SPECIAL PURPOSE FUNDS	10	392	11	420	10	420	10	420	10	420	10	419
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	111	5553	113	5758	114	6493	114	6725	114	6994	114	7303

Major Scientific Instrumentation

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	1206	0	2176	0	5932	0	6940	0	7327	0	7327
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	0	1206	0	2176	0	5932	0	6940	0	7327	0	7327

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Asst. Secretary for Museums

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	9	1064	9	579	9	679	9	679	9	679	9	679
UNRESTRICTED & SPECIAL PURPOSE FUNDS	1	180	1	220	1	230	1	255	1	280	1	280
RESTRICTED FUNDS	0	7	0	4	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	10	1251	10	803	10	909	10	934	10	959	10	959

Office of Museum Programs

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	12	423	12	438	15	748	15	678	15	608	15	603
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	74	0	76	0	88	0	86	0	92	0	91
RESTRICTED FUNDS	1	97	0	0	0	1	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	13	594	12	514	15	837	15	764	15	700	15	694

Office of the Registrar

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	3	146	3	151	3	151	3	151	4	216	4	216
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	3	146	3	151	3	151	3	151	4	216	4	216

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

National Museum of Natural History

	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1989	1990	1991	1992	1993	1994	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	570	26292	584	27573	610	31156	624	30857	632	31161	638	31431	
UNRESTRICTED & SPECIAL PURPOSE FUNDS	7	924	9	986	9	945	9	940	9	1158	9	1211	
RESTRICTED FUNDS	17	4174	18	4032	12	3830	12	4006	12	4041	12	4103	
GOVERNMENT GRANTS & CONTRACTS	18	1139	18	1172	18	1136	18	1154	17	1138	16	1136	
GRAND TOTAL - ALL FUNDS	612	32529	629	33763	649	37067	663	36957	670	37498	675	37881	

National Air and Space Museum

	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1989	1990	1991	1992	1993	1994	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	215	9552	216	9904	227	10704	230	10704	229	10657	229	10657	
UNRESTRICTED & SPECIAL PURPOSE FUNDS	48	4444	48	4255	48	4217	40	4358	48	4611	48	4646	
RESTRICTED FUNDS	2	937	2	738	0	429	0	439	0	410		409	
GOVERNMENT GRANTS & CONTRACTS	5	290	4	200	4	202	3	153	3	156	3	139	
GRAND TOTAL - ALL FUNDS	270	15231	270	15097	279	15632	281	15654	280	15834	280	15851	

National Museum of American History

	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY
	1989	1990	1991	1992	1993	1994	1989	1990	1991	1992	1993	1994	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	334	14502	340	15666	349	17263	349	17154	349	16426	345	16074	
UNRESTRICTED & SPECIAL PURPOSE FUNDS	12	1106	11	1129	11	1076	11	1082	10	1086	9	1080	
RESTRICTED FUNDS	5	2321	1	1599	1	084	1	965	1	1201		1541	
GRAND TOTAL - ALL FUNDS	351	10009	352	18394	361	19223	361	19201	360	18713	354	18695	



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

National Museum of American Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	119	5464	121	5714	128	5972	128	5972	129	5979	129	5979
UNRESTRICTED & SPECIAL PURPOSE FUNDS	4	761	4	547	4	414	4	370	4	355	4	324
RESTRICTED FUNDS	0	387	0	509	0	190	0	169	0	168		183
GOVERNMENT GRANTS & CONTRACTS	0	14	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	123	6626	125	6770	132	6576	132	6511	133	6502	133	6486

National Portrait Gallery

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	87	4131	88	4304	92	4501	92	4501	92	4376	92	4376
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	71	0	112	0	92	0	100	0	103	0	109
RESTRICTED FUNDS	0	509	0	572	0	200	0	330	0	350		350
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	87	4711	88	4988	92	4793	92	4931	92	4829	92	4835

Hirshhorn Museum + Sculpture Garden

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	78	3457	78	3556	78	3786	78	3686	78	3606	78	3606
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	435	0	419	0	406	0	390	0	370	0	352
RESTRICTED FUNDS	0	756	0	789	0	876	0	923	0	915		958
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	78	4648	78	4764	78	5068	78	4999	78	4891	78	4916

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Arthur M. Sackler Gallery / Freer Gallery of Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	68	4300	68	4390	73	4850	76	5042	77	5067	78	5115
UNRESTRICTED & SPECIAL PURPOSE FUNDS	1	91	1	94	1	94	1	97	1	97	1	97
RESTRICTED FUNDS	23	2616	23	2572	23	2636	25	2836	25	2836	25	2806
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	92	7007	92	7056	97	7580	102	7975	103	8000	104	8018

Archives of American Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	20	1101	20	1141	29	1364	30	1464	31	1494	32	1524
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	98	0	98	0	98	0	98	0	98	0	98
RESTRICTED FUNDS	12	823	12	833	12	850	12	862	12	876	12	887
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	32	2022	32	2072	41	2312	42	2424	43	2468	44	2509

Cooper-Hewitt Museum

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	32	1245	32	1297	35	1535	35	1560	35	1560	35	1610
UNRESTRICTED & SPECIAL PURPOSE FUNDS	26	2077	25	2118	25	2139	25	2163	25	2190	25	2175
RESTRICTED FUNDS	1	958	1	2666	1	164	1	165	1	164	1	160
GOVERNMENT GRANTS & CONTRACTS	0	50	0	50	0	50	0	50	0	50	0	50
GRAND TOTAL - ALL FUNDS	59	4330	58	6131	61	3800	61	3930	61	3964	61	3995

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

National Museum of African Art

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	57	3568	58	3659	59	3809	59	3859	59	3859	59	3959
UNRESTRICTED & SPECIAL PURPOSE FUNDS	4	305	4	170	1	220	1	226	1	226	1	126
RESTRICTED FUNDS	0	43	0	35	0	37	0	36	0	46	0	46
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	61	3916	62	3864	60	4066	60	4121	60	4131	60	4131

Anacostia Museum

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	20	1010	21	1050	27	1327	28	1413	28	1413	28	1463
UNRESTRICTED & SPECIAL PURPOSE FUNDS	1	44	1	47	1	47	1	47	1	47	1	47
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	21	1054	22	1097	28	1374	29	1460	29	1460	29	1510

Conservation Analytical Laboratory

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT
EMP \$ (000)	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
FEDERAL SALARY & EXPENSES	41	2519	42	2628	42	2628	42	2628	42	2628	42	2628
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	43	0	50	0	50	0	50	0	50	0	50
RESTRICTED FUNDS	1	47	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	17	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	42	2626	42	2678	42	2678	42	2678	42	2678	42	2678

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Office of Exhibits Central

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)
FEDERAL SALARY & EXPENSES	46	1900	46	1963	52	2143	53	2173	54	2203	54	2203
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	152	0	152	0	152	0	152	0	152	0	150
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	46	2052	46	2115	52	2295	53	2325	54	2355	54	2353

Smithsonian Inst. Traveling Exhibition Service

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)
FEDERAL SALARY & EXPENSES	15	688	15	708	21	1353	21	1428	22	1158	24	1078
UNRESTRICTED & SPECIAL PURPOSE FUNDS	31	1874	28	2195	28	2394	27	2478	26	2562	26	2651
RESTRICTED FUNDS	0	1685	0	1643	0	1146	0	739	0	850	0	900
GOVERNMENT GRANTS & CONTRACTS	0	9	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	46	4256	43	4546	49	4893	48	4645	48	4570	50	4629



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Asst. Secretary for Public Service

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	4	239	6	359	8	409	8	409	8	409	8	409
UNRESTRICTED & SPECIAL PURPOSE FUNDS	5	398	6	496	6	509	6	509	6	509	6	509
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	9	637	12	855	14	918	14	918	14	918	14	918

Telecommunications

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	5	235	5	244	6	264	6	264	6	264	6	264
UNRESTRICTED & SPECIAL PURPOSE FUNDS	9	666	9	668	9	709	9	723	9	744	9	749
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	14	901	14	912	15	973	15	987	15	1008	15	1013

Visitors Info. + Assoc. Reception Ctr.

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	2	180	2	183	2	233	2	233	2	233	2	233
UNRESTRICTED & SPECIAL PURPOSE FUNDS	24	1209	26	1174	30	1284	30	1294	30	1304	30	1314
RESTRICTED FUNDS	0	33	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	26	1422	28	1357	32	1517	32	1527	32	1537	32	1547

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Public Affairs

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
EMP \$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	12	644	12	664	13	692	13	692	13	692	13	692
UNRESTRICTED & SPECIAL PURPOSE FUNDS	5	647	5	667	6	685	6	685	6	685	6	685
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	17	1291	17	1331	19	1377	19	1377	19	1377	19	1377

Smithsonian Institution Press

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
EMP \$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)	EMP	\$ (000)
FEDERAL SALARY & EXPENSES	29	1239	29	1286	31	1420	32	1487	32	1487	32	1487
UNRESTRICTED & SPECIAL PURPOSE FUNDS	40	15056	40	19490	41	21500	41	22150	41	22600	41	22790
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	69	16295	69	20776	72	22920	73	23637	73	24087	73	24277

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

INTERNATIONAL ACTIVITIES

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)
FEDERAL SALARY & EXPENSES	7	791	8	839	17	1293	19	1415	19	1415	19	1465
UNRESTRICTED & SPECIAL PURPOSE FUNDS	10	799	11	842	13	893	13	893	13	893	13	893
RESTRICTED FUNDS	0	161	0	103	0	103	0	103	0	103	0	103
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	17	1751	19	1784	30	2289	32	2411	32	2411	32	2461

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

American Studies + Folklife Programs

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	9	908	10	937	14	1393	14	1554	13	1403	12	1153
UNRESTRICTED & SPECIAL PURPOSE FUNDS	15	975	15	912	16	1030	16	956	16	957	16	958
RESTRICTED FUNDS	0	606	0	2332	0	1793	0	2119	0	800		800
GOVERNMENT GRANTS & CONTRACTS	0	1833	0	2908	0	1187	0	1288	0	3893		1250
GRAND TOTAL - ALL FUNDS	24	4322	25	7089	30	5403	30	5917	29	7053	28	4161

Int'l Environmental Science Program

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	13	770	13	781	16	996	16	996	16	996	16	996
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	13	770	13	781	16	996	16	996	16	996	16	996

Office of Fellowships + Grants

	FY	1989	FY	1990	FY	1991	FY	1992	FY	1993	FY	1994
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	9	357	9	369	9	369	9	369	9	369	9	369
UNRESTRICTED & SPECIAL PURPOSE FUNDS	4	2052	4	2161	4	2402	4	3150	4	3382	4	3630
RESTRICTED FUNDS	0	37	0	27	0	15	0	15	0	15	0	15
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	13	2446	13	2557	13	2866	13	3542	13	3766	13	4032



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Ofc. Interdisciplinary Studies

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	3	161	4	218	4	365	4	265	4	265	4	265
UNRESTRICTED & SPECIAL PURPOSE FUNDS	2	222	3	339	3	449	2	272	2	300	2	272
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	5	383	7	557	7	814	6	537	6	565	6	537

Elementary and Secondary Education

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	7	403	7	415	8	461	8	441	8	441	8	441
UNRESTRICTED & SPECIAL PURPOSE FUNDS	3	224	4	280	4	324	4	337	4	339	4	341
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	10	627	11	695	12	785	12	778	12	780	12	782

National Science Resources Center

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	5	249	5	264	7	394	7	404	7	414	7	424
UNRESTRICTED & SPECIAL PURPOSE FUNDS	2	180	2	180	3	276	3	276	3	276	3	276
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	7	429	7	444	10	670	10	680	10	690	10	700

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Regents' Fellowships + Publication Funds

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	180	0	180	0	260	0	290	0	300	0	310
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	0	180	0	180	0	260	0	290	0	300	0	310

CARE, Res., Opport., Smithsonian Awards

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	5620	0	5927	0	6320	0	7025	0	7390	0	7530
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	0	5620	0	5927	0	6320	0	7025	0	7390	0	7530

Special Exhibition Fund

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	3220	0	3520	0	3620	0	3720	0	3020	0	3920
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	0	3220	0	3520	0	3620	0	3720	0	3020	0	3920

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Museum Support Center

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)	
FEDERAL SALARY & EXPENSES	41	1361	42	1433	45	2450	40	2354	42	1304	44	1394
UNRESTRICTED & SPECIAL PURPOSE FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	41	1361	42	1433	45	2450	40	2354	42	1304	44	1394

MSC - Equipment

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)		EMP \$ (000)	
FEDERAL SALARY & EXPENSES	0	3050	0	3058	0	8000	0	0000	0	8000	0	0000
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	0	3058	0	3058	0	8000	0	8000	0	8000	0	8000

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Assistant Secretary for External Affairs

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	5	300	13	746	13	770	13	795	13	795	13	795
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	5	300	13	746	13	770	13	795	13	795	13	795

Office of Membership + Development

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	20	1077	35	1678	40	1843	43	1952	47	2088	47	2090
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	20	1077	35	1678	40	1843	43	1952	47	2088	47	2090

Smithsonian Magazine

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	94	61135	94	60160	96	70640	97	73050	98	75530	100	79090
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	94	61135	94	60160	96	70640	97	73050	98	75530	100	79090



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

National Associates Program

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	40	18907	41	21650	43	23335	45	25266	45	27925	47	30879
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	40	18907	41	21650	43	23335	45	25266	45	27925	47	30879

Resident Associates Program

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	56	4790	56	5195	57	5200	58	5390	59	5600	60	5825
RESTRICTED FUNDS	0	20	0	20	0	20	0	20	0	20	0	20
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	56	4810	56	5215	57	5220	58	5410	59	5620	60	5845

Air + Space Magazine

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
UNRESTRICTED & SPECIAL PURPOSE FUNDS	27	8525	27	8500	28	9160	31	10320	32	11025	34	11960
GRAND TOTAL - ALL FUNDS	27	8525	27	8500	28	9160	31	10320	32	11025	34	11960

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Business Management Office

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	3	310	3	270	3	285	3	300	3	310	3	330
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	3	310	3	270	3	285	3	300	3	310	3	330

Product Development

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
UNRESTRICTED & SPECIAL PURPOSE FUNDS	5	675	6	760	6	790	6	815	6	840	6	885
GRAND TOTAL - ALL FUNDS	5	675	6	760	6	790	6	815	6	840	6	885

Museum Shops

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	227	22835	240	27205	245	28820	250	30320	255	32800	260	34420
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	227	22835	240	27205	245	28820	250	30320	255	32800	260	34420

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

Mall Order

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	06	19925	95	22155	106	23165	118	24500	128	25890	128	27359
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	86	19925	95	22155	106	23165	118	24500	120	25890	128	27359

Concessions

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
FEDERAL SALARY & EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0
UNRESTRICTED & SPECIAL PURPOSE FUNDS	2	2202	2	2900	2	2990	2	3080	2	3175	2	3265
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	2	2202	2	2900	2	2990	2	3080	2	3175	2	3265

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

CENTRAL MANAGEMENT OFFICES-SUMMARY

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)	\$ (000)
FEDERAL SALARY & EXPENSES	36	1977	37	2107	40	2304	40	2304	40	2304	40	2304
UNRESTRICTED & SPECIAL PURPOSE FUNDS	23	2494	26	2564	27	2574	27	2578	27	2581	27	2569
RESTRICTED FUNDS	0	131	0	126	0	127	0	107	0	107	0	107
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	59	4602	63	4797	67	5005	67	4989	67	4992	67	4980



SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

SPECIALIZED ADMIN + TECH OFFICES-SUMMARY

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	284	16121	319	18350	353	20456	357	20626	363	20969	366	21163
UNRESTRICTED & SPECIAL PURPOSE FUNDS	197	13049	205	14746	213	14832	213	14946	213	14826	213	14895
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	481	29170	524	33096	566	35288	570	35572	576	35795	579	36058

Less SI Admin. Overhead Recovery      -10,980      -12,120      -12,750      12,850      -13,000      -13,250

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

FACILITIES SERVICES

	FY 1989		FY 1990		FY 1991		FY 1992		FY 1993		FY 1994	
	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP	FT	EMP
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	1291	61088	1308	68396	1369	72759	1391	74715	1421	77112	1441	79247
UNRESTRICTED & SPECIAL PURPOSE FUNDS	16	1587	16	1810	16	1865	16	1624	16	1627	15	2074
RESTRICTED FUNDS	0	0	0	0	0	0	0	0	0	0	0	0
GOVERNMENT GRANTS & CONTRACTS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL - ALL FUNDS	1307	62675	1324	70206	1385	74624	1407	76339	1437	78739	1456	81321

SMITHSONIAN INSTITUTION  
APPLICATION OF OPERATING FUNDS  
BUDGET 1989 AND PROJECTED THROUGH 1994

INSTITUTIONAL TOTALS	FY		1989		FY		1990		FY		1991		FY		1992		FY		1993		FY		1994	
	FT		EMP		FT		EMP		FT		EMP		FT		EMP		FT		EMP		FT		EMP	
	\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)		\$ (000)	
FEDERAL SALARY & EXPENSES	4232	211240	4330	227737	4631	277740	4705	291758	4763	301769	4804	316478												
UNRESTRICTED & SPECIAL PURPOSE FUNDS	1178	211410	1241	238965	1288	250699	1313	262948	1329	277084	1335	285786												
RESTRICTED FUNDS	63	17776	58	19815	50	19011	54	19599	54	19187	53	19668												
GOVERNMENT GRANTS & CONTRACTS	155	22588	153	34563	146	30943	137	30358	125	30886	107	33484												
GRAND TOTAL - ALL FUNDS	5628	463014	5782	521080	6115	578393	6209	604663	6271	628926	6299	655416												

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**REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM**

35 - NATIONAL AIR & SPACE MUSEUM - 35

**RENOVATION & RESTORATION OF BUILDINGS PROGRAM**

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Paint Structural Trusses	0	0	125	0	0	0
Replace Third Floor Ceiling	0	0	650	0	0	0
Leak Repair in Gallery 105	50	0	0	0	0	0
Repaint & Restripe Parking Garage	0	0	250 *	0	0	0
Public Restroom Modifications	0	120	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Builtup Roof Repairs	100	450	450	0	0	0
Facade Repairs/Water Intrusion	100	0	0	0	0	0
Skylight Replacement	350	1,200	3,400	0	0	0
Window Reolacement	300	600	1,000	1,000	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Fire Protection Master Plan Implementation	500	100	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Garage Level Elevator Lobby & Access Control	0	0	90	0	0	0
Elevator Monitor Panel	0	0	20	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Energy Study Implementation	50	0	500	0	0	0
Miscellaneous HVAC Projects	100	0	0	0	0	0
Electrical Reliability Improvements	0	0	1,100	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Master Facility Plan	0	200	0	0	0	0
<b>Total Request</b>	<b>1,550</b>	<b>2,670</b>	<b>7,585</b>	<b>1,000</b>	<b>0</b>	<b>0</b>
* FY'91 fund to repair & paint garage after terrace work.						
<i>MAJOR CAPITAL RENEWAL</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
Master Facility Plan Implementation	0	0	0	0	0	2,100
Design Costs	0	0	0	0	210	330
Relocation Costs	0	0	0	0	0	210
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>210</b>	<b>2,640</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>1,550</b>	<b>2,670</b>	<b>7,585</b>	<b>1,000</b>	<b>210</b>	<b>2,640</b>

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Public Address System Modifications	0	0	100	0	0	0
East Wing Space Modifications	215	320	300	0	0	0
Escalator Storage Areas	0	0	50	0	0	0
Space Modifications, Rooms P-703 & P-713	0	0	100	0	0	0
Upgrade Electrical Panel Board	0	60	0	0	0	0
New Storage Area behind P-720	0	0	20	0	0	0
New Offices in Corridor 3400	0	0	150	0	0	0
<hr/>						
Total Request	215	380	720	0	0	0
<hr/>						
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	215	380	720	0	0	0

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (35 - NASM)	1,765	3,050	8,305	1,000	210	2,640

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
Waterproofing & Detection	350	0	350	0	0	0
Great Hall Painting	0	0	50	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Roof Moisture Study/Repair	0	10	50	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Fire Protection Improvements	200	200	125	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Courtyard Paving Repair	25	0	0	0	0	0
Southwest Exit Modifications	50	0	0	0	0	0
Repair Tile Floor at Great Hall, Third Floor	120	0	0	0	0	0
Exhaust System Modifications	0	100 *	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Southwest Corner Storm Drain Improvements	50	0	0	0	0	0
Test & Balance Air & Water Systems	0	0	0	0	35	0
Replace GPOB Steam Station	35	0	0	0	0	0
Water Pipe Replacement	0	200	0	0	0	0
Cooling Tower Modifications	0	0	50	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Dust Collection Room Structural Study/Repair	0	0	25	0	0	0
Total Request	840	510	650	0	35	0

\* Study to occur in FY'89; funding from Advanced Planning & Design Fund.

MAJOR CAPITAL RENEWAL	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. HVAC SYSTEM RENOVATION</b>						
HVAC Improvements	0	0	0	0	0	4,200
Window Replacement/Repair	75	0	0	0	0	100
Design Costs	0	0	0	0	420	0
Relocation Costs	0	0	0	0	0	100
Total Request	75	0	0	0	420	4,400
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>915</b>	<b>510</b>	<b>650</b>	<b>0</b>	<b>455</b>	<b>4,400</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

34 - AMERICAN ART/PORTRAIT GALLERY - 34

FEDERAL CONSTRUCTION PROGRAM

<i>ALTERATIONS &amp; MODIFICATIONS</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
Attic Modifications	0	100	0	0	0	0
Room 334 Mezzanine and NW Attic Improvements	0	0	375	0	0	0
South Portico Lighting Study & Implementation	35	0	0	0	0	0
Building Renovation (Design & Construction)	0	0	0	0	160	1,600
<hr/>						
Total Request	35	100	375	0	160	1,600
<hr/>						
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	35	100	375	0	160	1,600

	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
BUREAU TOTAL (34 - AAPG)	950	610	1,025	0	615	6,000

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
General Repairs	20	20	20	20	20	20
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
No Projects Identified	0	0	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
No Projects Identified	0	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Install Elevator & Freight Lift	135	0	0	0	0	0
Building & Parking Lot Illumination	0	0	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Miscellaneous HVAC System Repairs	25	150	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>180</b>	<b>170</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>
<b>MAJOR CAPITAL RENEWAL</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>180</b>	<b>170</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
 46 - ANACOSTIA MUSEUM - 46

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
New Lighting for Gallery	0	20	0	0	0	0
Total Request	0	20	0	0	0	0
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	20	0	0	0	0

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (46 - AM)	180	190	20	20	20	20

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Miscellaneous Ceiling Tile Repair	0	0	15	0	0	0
Rotunda & Halls Painting	0	0	165	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Facade Statuary Refurbishment	0	0	415	0	0	0
Entry Arches Rehabilitation	0	0	105	0	0	0
Exterior Painting	0	100	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
No Projects Identified	0	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
North Entrance Handicapped Accessibility	0	0	0	75	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
SE Pavilion Restroom Renovation	100	0	0	0	0	0
Cooling Tower #1 Repairs/Replacement	0	70	0	0	0	0
Chiller Replacement	0	0	0	50	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>100</b>	<b>170</b>	<b>700</b>	<b>125</b>	<b>0</b>	<b>0</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
<b>1. HVAC &amp; ELECTRICAL</b>						
Construction Costs	0	0	0	6,000	6,000	6,000
Asbestos Abatement Costs	0	0	0	0	500	500
Design Costs	525	0	0	500	500	500
<b>Total Request</b>	<b>525</b>	<b>0</b>	<b>0</b>	<b>6,500</b>	<b>7,000</b>	<b>7,000</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>625</b>	<b>170</b>	<b>700</b>	<b>6,625</b>	<b>7,000</b>	<b>7,000</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

33 - ARTS &amp; INDUSTRIES BUILDING - 33

FEDERAL CONSTRUCTION PROGRAM

<u>ALTERATIONS &amp; MODIFICATIONS</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
Miscellaneous Interior Modifications	660	300	0	200	800	800
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total Request	660	300	0	200	800	800
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	660	300	0	200	800	800

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
BUREAU TOTAL (33 - AIB)	1,285	470	700	6,825	7,800	7,800

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<i>1. GENERAL REPAIRS</i>						
Road Repair & Improvements	400	200	300	250	40	40
General Repairs, Whipple	50	50	50	50	50	50
General Repairs, Oak Ridge & Cambridge	30	0	0	0	0	0
General Repairs, Oak Ridge	0	30	60	60	60	60
General Repairs, Cambridge	0	15	15	15	15	15
<i>2. FACADE, ROOF &amp; TERRACE REPAIRS</i>						
No Projects Identified	0	0	0	0	0	0
<i>3. FIRE DETECTION &amp; SUPPRESSION</i>						
Fire Detection System - Oak Ridge	15	40	0	0	0	0
<i>4. ACCESS, SAFETY &amp; SECURITY</i>						
Security System - Whipple	0	0	0	0	70	0
<i>5. UTILITY SYSTEM REPAIRS</i>						
Backup Power and Power Conditioning - Cambridge	0	0	0	100	0	0
<i>6. ADVANCED PLANNING &amp; INSPECTION</i>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>495</b>	<b>335</b>	<b>425</b>	<b>475</b>	<b>235</b>	<b>165</b>
<i>MAJOR CAPITAL RENEWAL</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>495</b>	<b>335</b>	<b>425</b>	<b>475</b>	<b>235</b>	<b>165</b>

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
 51 - SMITHSONIAN ASTROPHYSICAL OBSERVATORY - 51

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Communications Network	120	0	0	0	0	0
Infrared Telescope Building	0	200	0	0	0	0
Enclosure for 10M Reflector (Design & Construction)	0	0	30	315	0	0
Commons Building Modification	0	0	40	0	0	0
Miscellaneous Modifications - Cambridge	0	0	35	35	35	35
Caretaker's Residence	0	0	25	250	0	0
Snow Plow Garage	0	0	200	0	0	0
<hr/>						
Total Request	120	200	330	600	35	35
<hr/>						
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	120	200	330	600	35	35

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (51 - SAO)	615	535	755	1,075	270	200

**RENOVATION & RESTORATION OF BUILDINGS PROGRAM**

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
General Repairs	50	20	20	20	20	20
Sidewalk Repair/Replacement	85	0	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Mansion Roof: Immediate Repairs & Replacement	275	0	0	0	0	0
Receiving Room Leakage, Mansion Basement	100	0	0	0	0	0
Window Restoration, Miller House	0	0	0	0	75	0
South Facade Stone Repointing, Miller House	35	0	0	0	0	0
Fence Repair & Painting/Restoration Study	0	10	80	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Sprinkler System, Miller House	0	0	0	0	120	0
Miscellaneous Fire Protection Improvements	185	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Miller House Elevator Replacement	180	0	0	0	0	0
Fiberglass/Air Quality Study	20	0	0	0	0	0
Handicapped Access	20	200	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Energy Study Design & Implementation	50	200	400	415	0	0
Electrical Renovation, Miller House	0	60	0	0	0	0
Study & Implem. of HVAC Improvements, Miller House	0	0	0	600	0	0
Domestic Water, Miller House	0	0	0	150	0	0
Storm Window Installation, Miller House	0	0	0	0	0	24
Emergency Generator/Surge Protection, Mansion	150	0	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>1,150</b>	<b>490</b>	<b>500</b>	<b>1,185</b>	<b>215</b>	<b>44</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>1,150</b>	<b>490</b>	<b>500</b>	<b>1,185</b>	<b>215</b>	<b>44</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

58 - COOPER-HEWITT MUSEUM - 58

FEDERAL CONSTRUCTION PROGRAM

<u>ALTERATIONS &amp; MODIFICATIONS</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
New Vestibule & Employee Entrance	0	10	0	0	0	0
Attic Space Renovation	0	0	0	0	275	0
Miller House Planning/Design	0	35	0	0	0	0
Total Request	0	45	0	0	275	0
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	45	0	0	275	0

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
BUREAU TOTAL (58 - CHM)	1,150	535	500	1,185	490	44
Note: See "Other Projects" sheet for additional, non-bureau projects within the bureaus facility.						

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<u>REPAIR, RESTORATION &amp; CODE COMPLIANCE</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
<b>1. GENERAL REPAIRS</b>						
Dock Structural Analysis & Repair	25	0	0	0	0	0
General Repairs	30	45	60 *	75 *	90 *	105
Water Tower Repairs	0	30	0	0	0	0
Ren. of Lower Level (Old Dominion Bldg.)	0	30	275	0	0	0
Road Repairs & Improvements	50 **	0	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Stucco Refurbishment & Painting	0	0	0	50	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Misc. Fire Protection (Field Lab., Admin. Bldg. Balon, Calf & Mule Barns)	20	20	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Restroom Modifications (Visitor's Center)	0	0	0	25	0	0
Access - Administration Building	0	0	0	25	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
No Projects Identified	0	0	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Master Plan Update	0	0	105	0	0	0
<b>Total Request</b>	<b>125</b>	<b>125</b>	<b>440</b>	<b>175</b>	<b>90</b>	<b>105</b>

\* Subject to reevaluation each fiscal year.

\*\* FY'89 funding for Design; Construction funding provided under Alterations &amp; Modifications Category.

<u>MAJOR CAPITAL RENEWAL</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
No projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>125</b>	<b>125</b>	<b>440</b>	<b>175</b>	<b>90</b>	<b>105</b>

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
 44 - SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER - 44

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Greenhouse Addition	0	100	0	0	0	0
Storage Building	0	0	180	0	0	0
Parking Lot (40 Cars)	0	0	30	0	0	0
Visitor Center at the Dock (Design & Const.)	0	0	200	0	0	0
Caretaker/Security Residence	0	0	100	0	0	0
Road Repairs & Improvements	0	0	150 *	150 *	0	0
<hr/>						
Total Request	0	100	660	150	0	0

\* Funding for Construction; Design funding provided under FY'89 Repairs, Restoration & Code Compliance Catagory.

TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	100	660	150	0	0
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	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (44 - SERC)	125	225	1,100	325	90	105

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Renovation of Galleries	955	300	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Facade Pointing & Lighting Repair	0	500	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Fire Alarm Improvements - Gallery & Attic Levels	100	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Security System	150	0	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Modify Steam Heating System	150	0	0	0	0	0
New Electrical Substation	0	600	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>1,355</b>	<b>1,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>1,355</b>	<b>1,400</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Sitework and Landscaping Modifications	0	0	400	0	0	0
Auditorium Renovation	0	0	300	0	0	0
<hr/>						
Total Request	0	0	700	0	0	0
<hr/>						
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	0	700	0	0	0

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (37 - FGA)	1,355	1,400	700	0	0	0

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Parapet & Wall Ventilation	50	0	470	0	0	0
Pressure Grouting/Sandblasting- Sculpture Garden	0	0	5	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Court Sill	0	0	275	0	0	0
Court Glass & Gaskets	235	0	0	0	0	0
Plaza Resurfacing and Landscaping	1,800	1,200	0	0	0	0
Roof Inspection/Survey	10	0	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Sprinkler Extensions	0	0	50	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Paint Spray Booth Modifications	0	100	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Miscellaneous HVAC Projects	100	0	500	625	0	0
Relocation & Replacement of Condensate Pumps	0	100	0	0	0	0
Interior Lighting Zoning Modifications	0	0	0	100	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>2,195</b>	<b>1,400</b>	<b>1,300</b>	<b>725</b>	<b>0</b>	<b>0</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>2,195</b>	<b>1,400</b>	<b>1,300</b>	<b>725</b>	<b>0</b>	<b>0</b>

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

45 - HIRSHHORN MUSEUM &amp; SCULPTURE GARDEN - 45

FEDERAL CONSTRUCTION PROGRAM

<i>ALTERATIONS &amp; MODIFICATIONS</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
Interior Lighting Modifications	0	0	25	0	0	0
Total Request	0	0	25	0	0	0
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	0	25	0	0	0

	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
BUREAU TOTAL (45 - HMSG)	2,195	1,400	1,325	725	0	0

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
Loading Dock, Vapor Barrier & Ceiling Work	0	0	0	115	0	0
Shading & Screening	0	0	0	0	0	110
4th. & 5th. Floor Painting & Repair of Wall Penetrations	0	0	5	180	0	0
Repave & Paint Parking Lot and Roads	0	0	0	175	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Fountain Repair	0	0	5	0	0	0
Terrace Repair	500	0	0	0	0	0
Garage Leakage Study	0	0	10	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
No Projects Identified	0	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Modification for Disabled Access	155	0	0	0	0	0
Numismatic Security Study/Implementation	0	50	0	0	0	0
Elevator Modifications	0	225	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Elect. Switchgear Replacement	425	0	0	750	800	0
Bsemt. Ventilation Interim Improvements	200 *	200	0	0	0	0
Damper & Exhaust Fan Modifications	0	0	0	60	0	0
4th. & 5th. Floor Thermostats	0	0	0	35	0	0
Exhaust Air Heat Recovery	0	0	0	170	0	0
AB070 Dust Collection System	0	75	0	0	0	0
Replace Drinking Fountain Cooling System	0	0	50	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Trash Compactor Study	0	0	15 **	0	0	0
<b>Total Request</b>	<b>1,280</b>	<b>550</b>	<b>85</b>	<b>1,485</b>	<b>800</b>	<b>110</b>

\* \$50K in FY'88 from Advanced Planning & Design for study.

\*\* Subsequent year funding will be required for implementation.



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
 30 - NATIONAL MUSEUM OF AMERICAN HISTORY - 30

MAJOR CAPITAL RENEWAL	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. MASTER COORDINATION PLAN</b>						
Demolition, Asbestos Removal, Arch./Struct., HVAC, Special Constr., Fire Protection and Construction Contingency	1,852	3,200	3,750	0	0	0
Design Costs	148	275	325	0	0	0
Relocation Costs	100	200	100	0	0	0
<b>2. BASEMENT VENTILATION IMPROVEMENTS</b>						
Demolition, Asbestos Removal, Arch./Struct., HVAC, Special Constr., Fire Protection and Construction Contingency	0	0	0	0	2,500	1,400
Design Costs	0	0	0	250	140	0
Relocation Costs	0	0	0	0	300	300
<b>Total Request</b>	<b>2,100</b>	<b>3,675</b>	<b>4,175</b>	<b>250</b>	<b>2,940</b>	<b>1,700</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>3,380</b>	<b>4,225</b>	<b>4,260</b>	<b>1,735</b>	<b>3,740</b>	<b>1,810</b>

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
North & South Entrance Grate System	0	0	70	0	0	0
Mezzanines - All Floors	370	400	400	0	0	0
Replace Facade Stones with New Museum Name	0	0	130	0	0	0
Fountain Modifications	0	0	0	0	175	0
Conservation Lab Improvement	0	300	0	0	0	0
Basement Modifications	0	0	300	0	400	400
Compact Shelving, Archives	0	0	150	0	0	0
<b>Total Request</b>	<b>370</b>	<b>700</b>	<b>1,050</b>	<b>0</b>	<b>575</b>	<b>400</b>
<b>TOTAL FOR FEDERAL CONSTRUCTION PROGRAM</b>	<b>370</b>	<b>700</b>	<b>1,050</b>	<b>0</b>	<b>575</b>	<b>400</b>

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>BUREAU TOTAL (30 - NMAH)</b>	<b>3,750</b>	<b>4,925</b>	<b>5,310</b>	<b>1,735</b>	<b>4,315</b>	<b>2,210</b>

Note: See "Other Projects" sheet for additional,  
 non-bureau projects within the bureaus facility.

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
Baird Auditorium Improvements (Stage Mech. Lift)	0	0	20	0	0	0
Inner Doors at Loading Dock	0	0	0	60	0	0
Gallery Windows: Painting & Scraping	120	0	0	0	0	0
Parking Lot Repair	0	0	300	0	0	0
Rotunda Column Cleaning	0	0	65	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Roof Repair - Design & Construction	100 *	0	0	0	0	500
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Fire Protection Master Plan Implementation	400	100	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
North & South Entrance Improvements	350	0	0	0	0	0
New Interior Handrails	210	0	100	110	140	140
Hall 16 Disabled Access	10	120	0	0	0	0
Elevator Repairs	0	85	90	95	100	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Utility Tunnel Repairs	0	0	100	750	750	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Public Area Restoration Planning	0	0	100 **	0	0	0
Total Request	1,190	305	775	1,015	990	640

\* FY'89 funds are for repairs. Subsequent year funding subject to results of moisture survey.

\*\* Subsequent year funding subject to results of planning effort.

MAJOR CAPITAL RENEWAL	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. MASTER IMPLEMENTATION PLAN</b>						
Master Plan Improvements	0	8,100 **	12,000	14,000	17,000	12,000
Design Costs, Master Plan (incl. essential repairs)	1,000	490 **	840	1,020	720	740
<b>2. INTERIM CORRECTIVE MEASURES</b>						
Interim Improvements	0	900 **	1,000	1,000	1,000	1,000
Design Costs, Interim Corrective Measures	0	60 **	60	60	60	60
Relocation Costs, Master Plan & Interim	0	400 **	500	500	500	500
Total Request	1,000	9,950	14,400	16,580	19,280	14,300

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

31 - NATIONAL MUSEUM OF NATURAL HISTORY - 31

TOTAL FOR R&R OF BUILDINGS PROGRAM	2,190	10,255	15,175	17,595	20,270	14,940
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FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Hall 10 Demolition	0	0	50	0	0	0
Hall 27 Demolition	0	0	70	0	0	0
Hall 30 Demolition	0	0	70	0	0	0
Checkroom Improvements	0	0	15	0	0	0
Mezzanine for Rooms 10-C, 11-E	0	0	165	0	0	0
New Restrooms, West Loading Dock	0	125	0	0	0	0
Space Modifications/Improvements (MSC move)	0	15	300	200	0	0
Office Space Modifications	230	0	0	0	0	0
Board Room	0	985	0	0	0	0
Total Request	230	1,125	1,170	200	0	0

TOTAL FOR FEDERAL CONST. PROGRAM	230	1,125	1,170	200	0	0
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	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (31 - NMNH)	2,420	11,380	16,345	17,795	20,270	14,940

Note: See "Other Projects" sheet for additional, non-bureau projects within the bureaus facility.

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Door Repair/Replacement at Pod 4	0	35	0	0	0	0
Miscellaneous Painting	0	0	45	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
No Projects Identified	0	0	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
No Projects Identified	0	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Hazardous Waste Storage	70	0	0	0	0	0
Fume Hood Modifications	100	100	0	0	0	0
Modifications to Holding Tank	0	30	0	0	0	0
Exterior Lighting Modifications	0	0	0	100	0	0
Public Address System	0	0	50	0	0	0
Miscellaneous Access & Road Repairs	0	0	40	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Emergency Water Supply Increase	0	100	0	0	0	0
Cooling Tower Renovation & Inspection	0	40	0	0	0	0
Miscellaneous Electrical Modifications	0	0	60	0	0	0
Miscellaneous HVAC Modifications	0	0	50	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Uninterrupted Power Supply Study	0	0	25	0	0	0
<b>Total Request</b>	<b>170</b>	<b>305</b>	<b>270</b>	<b>100</b>	<b>0</b>	<b>0</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>170</b>	<b>305</b>	<b>270</b>	<b>100</b>	<b>0</b>	<b>0</b>



FEDERAL CONSTRUCTION PROGRAM

<u>ALTERATIONS &amp; MODIFICATIONS</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
Weather Enclosure at Loading Dock	0	285	0	0	0	0
Lunch Room Expansion	0	0	200	0	0	0
MSP Greenhouse	0	0	500	0	0	0
MSP Lab Renovation	0	0	500	0	0	0
Total Request	0	285	1,200	0	0	0
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	285	1,200	0	0	0

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
BUREAU TOTAL (71 - MSC)	170	590	1,470	100	0	0

Note: See "Other Projects" sheet for additional,  
non-bureau projects within the bureaus facility.

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<i>1. GENERAL REPAIRS</i>						
No Projects Identified	0	0	0	0	0	0
<i>2. FACADE, ROOF &amp; TERRACE REPAIRS</i>						
Roof Repairs	80	435	0	0	0	0
<i>3. FIRE DETECTION &amp; SUPPRESSION</i>						
Fire Protection Improvements	100	0	0	0	0	0
<i>4. ACCESS, SAFETY &amp; SECURITY</i>						
No Projects Identified	0	0	0	0	0	0
<i>5. UTILITY SYSTEM REPAIRS</i>						
Energy Study Implementation	200	0	450	450	0	0
<i>6. ADVANCED PLANNING &amp; INSPECTION</i>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>380</b>	<b>435</b>	<b>450</b>	<b>450</b>	<b>0</b>	<b>0</b>
<i>MAJOR CAPITAL RENEWAL</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>380</b>	<b>435</b>	<b>450</b>	<b>450</b>	<b>0</b>	<b>0</b>

FEDERAL CONSTRUCTION PROGRAM

<u>ALTERATIONS &amp; MODIFICATIONS</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
No Projects Identified	0	0	0	0	0	0
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Total Request	0	0	0	0	0	0
 TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	 0	 0	 0	 0	 0	 0

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
BUREAU TOTAL (36 - RG)	380	435	450	450	0	0

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
Road Repairs between Buildings 7 thru 19, & 28	0	0	200	0	0	0
Restroom for Disabled, Building 22 (NASM)	30	0	0	0	0	0
Covered Storage for Rolling Equipment (NASM)	165	0	0	0	0	0
Painting & Repair of Building 28 (NMAH)	40	0	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Roof & Structure Repairs, All Buildings	50	50	100	50	50	50
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Buildings 25, 26, & 28 - Fire Protection System	0	0	0	350	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Building 10 Addition for Chemical Cleaning (NASM)	200	0	0	0	0	0
Emergency Generator, Garber Facility	0	0	0	400	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Buildings 7, 22, & 23 - Electrical Upgrade	0	0	0	40	0	0
Building 22 & 23 - HVAC Upgrade	0	0	0	100	0	0
Replace Windows - Various Buildings	0	0	0	50	0	0
Miscellaneous Electrical Repairs	0	0	225	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>485</b>	<b>50</b>	<b>525</b>	<b>990</b>	<b>50</b>	<b>50</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>485</b>	<b>50</b>	<b>525</b>	<b>990</b>	<b>50</b>	<b>50</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

38 - SILVER HILL FACILITY - 38

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Improve NMNH Buildings 25 & 26 and Building 27	0	0	0	995	0	0
Construct Balcony, Building 24 (NASM)	0	0	0	60	0	0
Exhibit Storage Building (NASM)	0	0	750	0	0	0
OPLANTS Maintenance Building	0	0	0	70	0	0
Upgrade Building 17 (NMAH)	0	325	700	750	750	0
Loading Facility (NMAH)	0	0	50	0	0	0
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Total Request	0	325	1,500	1,875	750	0
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TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	325	1,500	1,875	750	0

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (38 - SHF)	485	375	2,025	2,865	800	50

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
Tunnel Repairs & Waterproofing	100	350	0	0	0	0
Structural Inspection, Pre-pln'g Study & Implem.	100 *	250	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Facade Restoration (Masonry)	50	50	50	0	0	0
Window Restoration/Replacement	750 **	600	200	0	0	0
Repainting of SI Building Facade	0	250	0	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Smoke Detection/Sprinklers/Fire Zones	250	0	0	0	0	300
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Handicapped Accessibility, South Tower	0	100	0	0	0	0
Restroom Modifications	0	0	130	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Redesign & Replace SI Steam Station	0	0	0	300	0	0
Reutilize Exhaust Air	0	0	0	300	0	0
Miscellaneous Mechanical Improvements	100	0	0	0	0	0
Room T650 Air Conditioning	0	0	100	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Basement Space Use Master Plan Study	65	0	50	0	0	400
<b>Total Request</b>	<b>1,415</b>	<b>1,600</b>	<b>530</b>	<b>600</b>	<b>0</b>	<b>700</b>

\* FY'88; funds (\$100K) for study with subsequent funding for design and implementation in the outyears.

\*\* Subsequent year funding subject to change due to restudy of implementation method.

MAJOR CAPITAL RENEWAL	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. Energy Study</b>						
Audit/Implementation	70	0	0	0	0	0
Design Costs	0	0	0	0	0	400
Relocation Costs	0	0	0	0	0	0
<b>Total Request</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>400</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>1,485</b>	<b>1,600</b>	<b>530</b>	<b>600</b>	<b>0</b>	<b>1,100</b>

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

32 - SMITHSONIAN INSTITUTION BUILDING - 32

FEDERAL CONSTRUCTION PROGRAM

<i>ALTERATIONS &amp; MODIFICATIONS</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
Miscellaneous Office Modifications	0	0	100	50	50	50
Space Modifications/Relocations	0	0	0	0	800	500
<hr/>						
Total Request	0	0	100	50	850	550
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	0	0	100	50	850	550

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
BUREAU TOTAL (32 - SIB)	1,485	1,600	630	650	850	1,650

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
General Repairs	50	75	125	150	150	150
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
Painting of Structures	100	0	0	35	35	45
Roof Repairs at Various Sites	55	55	55	0	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Fire Protection - Various Sites	100	0	0	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Petroleum Storage Facility - BCI	25	0	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Communications Structure - BCI	0	0	45	0	0	0
Emergency Generator & Building - Naos	175	0	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Ancon Building Evaluation	15	0	0	0	0	0
<b>Total Request</b>	<b>520</b>	<b>130</b>	<b>225</b>	<b>185</b>	<b>185</b>	<b>195</b>
<b>MAJOR CAPITAL RENEWAL</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>520</b>	<b>130</b>	<b>225</b>	<b>185</b>	<b>185</b>	<b>195</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

50 - SMITHSONIAN TROPICAL RESEARCH INSTITUTE - 50

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Seawater Systems Improvement - Naos	0	0	60	0	0	0
Aquarium Building Renovation - Naos	0	0	25	330	0	0
Lab Building Renovation - Naos	0	0	0	635	0	0
Floating Dock - Naos	0	0	0	70	0	0
Landscaping - Naos	0	0	30	0	0	0
Dive Locker Addition - Naos	0	0	0	30	0	0
Building 356 Renovation - Naos	0	0	0	0	10	0
West Dock Facility - BCI	0	0	0	50	0	0
Boathouse Renovation - BCI	0	0	165	0	0	0
Miscellaneous Demolition - BCI	0	0	105	45	0	0
Staff Housing - BCI	0	0	0	450	0	0
Dock - Gamboa	300	0	0	0	0	0
Administration Building Renovation - Tivoli	0	0	100	0	0	0
Visitors Center - Tivoli	0	0	0	0	0	130
Arboretum - Tivoli	0	0	0	0	0	170
Library Expansion - Tivoli	0	0	575	0	0	0
Total Request	300	0	1,060	1,610	10	300

TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	300	0	1,060	1,610	10	300
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BUREAU TOTAL (50 - STRI)	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
	820	130	1,285	1,795	195	495

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM

00 - MISCELLANEOUS - 00

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
<b>1. GENERAL REPAIRS</b>						
Grounds, Sidewalk & Parking Lot Repairs	50	75	100	100	100	100
Emergency Repairs Throughout the SI	100	200	200	200	200	200
Exterior Signage - Design & Implementation	0	0	50	100	200	0
Child Care Center	300	0	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS.</b>						
General Facade Renovations	200	200	200	200	200	200
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
Lightning Protection, Various Sites	160	0	0	205	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
Asbestos Abatement	1,000	500	500	500	500	500
Security Lighting Mall Buildings	450	0	450	200	350	675
Emergency Power Study/Design	150	450	0	0	0	0
Security Requirements	300	300	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
Mall Master Raceway System	100	100	175	150	150	150
Upgrade Controls	200	0	200	200	200	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
Advance Planning & Design Funds	375	393	500	500	500	500
Combined Master Plan for SI Facilities	150	0	150	150	150	150
Mall Master Site Plan	0	140	100	0	0	500
S.I. Wide Accessibility Plan	0	0	300	0	0	500
<b>Total Request</b>	<b>3,535</b>	<b>2,358</b>	<b>2,925</b>	<b>2,505</b>	<b>2,550</b>	<b>3,475</b>
<b>MAJOR CAPITAL RENEWAL</b>	<b>FY'89</b>	<b>FY'90</b>	<b>FY'91</b>	<b>FY'92</b>	<b>FY'93</b>	<b>FY'94</b>
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>3,535</b>	<b>2,358</b>	<b>2,925</b>	<b>2,505</b>	<b>2,550</b>	<b>3,475</b>

FEDERAL CONSTRUCTION PROGRAM

<u>ALTERATIONS &amp; MODIFICATIONS</u>	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
No Projects Identified	0	0	0	0	0	0
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total Request	0	0	0	0	0	0
 <b>TOTAL FOR FEDERAL CONSTRUCTION PROGRAM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

	<u>FY'89</u>	<u>FY'90</u>	<u>FY'91</u>	<u>FY'92</u>	<u>FY'93</u>	<u>FY'94</u>
<b>BUREAU TOTAL (00 - MISC)</b>	<b>3,535</b>	<b>2,358</b>	<b>2,925</b>	<b>2,505</b>	<b>2,550</b>	<b>3,475</b>

**REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM**  
**OTHER PROJECTS**

**RENOVATION & RESTORATION OF BUILDINGS PROGRAM**

<i>REPAIR, RESTORATION &amp; CODE COMPLIANCE</i>	<i>FY'89</i>	<i>FY'90</i>	<i>FY'91</i>	<i>FY'92</i>	<i>FY'93</i>	<i>FY'94</i>
<b>1. GENERAL REPAIRS</b>						
No Projects Identified	0	0	0	0	0	0
<b>2. FACADE, ROOF &amp; TERRACE REPAIRS</b>						
East Garden Paving & Wall Repair	0	0	0	710	0	0
<b>3. FIRE DETECTION &amp; SUPPRESSION</b>						
SISC Smoke Detection	0	0	95	0	0	0
<b>4. ACCESS, SAFETY &amp; SECURITY</b>						
SIL Security Modifications, NMNH	0	25	0	0	0	0
<b>5. UTILITY SYSTEM REPAIRS</b>						
No Projects Identified	0	0	0	0	0	0
<b>6. ADVANCED PLANNING &amp; INSPECTION</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>25</b>	<b>95</b>	<b>710</b>	<b>0</b>	<b>0</b>
<b>MAJOR CAPITAL RENEWAL</b>						
No Projects Identified	0	0	0	0	0	0
<b>Total Request</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL FOR R&amp;R OF BUILDINGS PROGRAM</b>	<b>0</b>	<b>25</b>	<b>95</b>	<b>710</b>	<b>0</b>	<b>0</b>



REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
OTHER PROJECTS

FEDERAL CONSTRUCTION PROGRAM

ALTERATIONS & MODIFICATIONS		FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
SIA:	Storage Building Renovation, NZP/CRC	15	165	0	0	0	0
CAL:	Office & Space Modifications, MSC	0	20	240	0	0	0
OH:	Master Development Plan	0	0	150	150	0	0
OH:	New Shipping/Receiving Structure, Soldiers' Home	0	0	0	140	0	0
OH:	New Cooper-Hewitt Garden, CHM	0	0	0	0	0	150
OH:	Water Supply to Planters, NASM	0	0	50	0	0	0
OPPS:	Photo Lab Storage Expansion, NMAH	0	200	0	0	0	0
OPPS:	Photo Lab Improvements, NMNH	75	0	0	0	0	0
SIL:	Rare Books Library, NMNH	0	0	175	0	0	0
SIL:	Compact Shelving, NMAH	0	0	255	100	100	0
MISC:	Alterations & Modifications Planning	0	75	100	125	150	150
Total Request		90	460	970	515	250	300
TOTAL FOR FEDERAL CONSTRUCTION PROGRAM		90	460	970	515	250	300

	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
BUREAU TOTAL (OTHERS)	90	485	1,065	1,225	250	300

REPAIR & RESTORATION OF BUILDINGS & FEDERAL CONSTRUCTION - FIVE YEAR PROGRAM  
SUMMARY SHEET

RENOVATION & RESTORATION OF BUILDINGS PROGRAM

REPAIR, RESTORATION & CODE COMPLIANCE	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
1. GENERAL REPAIRS	3,200	1,845	3,990	1,570	945	870
2. FACADE, ROOF & TERRACE REPAIRS	5,190	5,710	6,395	2,045	360	795
3. FIRE DETECTION & SUPPRESSION	2,030	460	270	555	120	300
4. ACCESS, SAFETY & SECURITY	3,730	2,385	1,470	1,530	1,160	1,315
5. UTILITY SYSTEM REPAIRS	2,210	1,895	3,905	5,395	1,935	174
6. ADVANCED PLANNING & INSPECTION	605	733	1,370	650	650	2,050
Subtotal	16,965	13,028	17,400	11,745	5,170	3,504

MAJOR CAPITAL RENEWAL	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Subtotal	3,770	13,625	18,575	23,330	29,850	30,440

TOTAL FOR R&R OF BUILDINGS PROGRAM	20,735	26,653	35,975	35,075	35,020	35,944
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FEDERAL CONSTRUCTION PROGRAM, MINOR CONSTRUCTION

ALTERATIONS & MODIFICATIONS	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
Subtotal	2,020	4,040	9,860	5,200	3,705	3,985

TOTAL FOR FEDERAL CONSTRUCTION PROGRAM	2,020	4,040	9,860	5,200	3,705	3,985
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	FY'89	FY'90	FY'91	FY'92	FY'93	FY'94
GRAND TOTAL	22,755	30,693	45,835	40,275	38,725	39,929

National Zoological Park  
Construction and Improvements  
FY 1989 - FY 1994

Activity	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
Master Plan (Rock Creek)						
Olmsted Walk Landscaping			\$935,000			
Aquatic Exhibits						
Amazonia Exhibit	\$3,200,000	\$4,500,000				
Living-in-Water			\$7,000,000			
Aquatic Habitats				\$7,000,000	\$6,000,000	
Parking Facility (1)				\$1,800,000	\$4,000,000	\$8,200,000
Grassland & Forest Exhibits				\$1,650,000	\$7,700,000	\$5,000,000
Loop Trail Graphics			\$300,000			
Rock Creek Renovations & Repairs	\$1,555,000	\$1,400,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Development Plan (Front Royal)						
Water Systems & Hydrants			\$775,000			
Maintenance Facility			\$1,200,000			
Multi-purpose Animal Facility			\$6,105,000			
Wildlife Training Center (renov.)			\$180,000	\$1,800,000		
Road Improvements/Extensions			\$110,000	\$1,100,000		
Pachyderm Facility					\$1,100,000	\$10,000,000
Front Royal Renovations & Repairs	\$550,000	\$600,000	\$800,000	\$800,000	\$800,000	\$800,000
TOTAL	\$5,305,000	\$6,500,000	\$19,405,000	\$16,150,000	\$21,600,000	\$26,000,000

(1) Actual construction of the Parking Facility is scheduled to begin in FY 1993. The construction costs are estimated to be \$19,000,000 (including design) with citizen participation, through parking revenues, contributing \$5,000,000. The chart reflects only the requirement for appropriated funds.

# SMITHSONIAN INSTITUTION

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